COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
PIEDMONT REGIONAL OFFICE
4949-A Cox Road, Glen Allen, Virginia 23060
(804) 527-5020 Fax (804) 527-5106
www.deq.virginia.gov

L. Preston Bryant, Jr.
Secretary of Natural Resources

David K. Paylor
Director

Gerard Seeley, Jr.
Regional Director

AUG 0 6 2008

Myrtle D. Faulkner
Mizpah Nursing Home, Inc.
P.O. Box 70
Locust Hill, VA 23092

CERTIFIED MAIL

RETURN RECEIPT REQUESTED

RE: VPDES Permit No. VA0063029 Reissuance

Dear Ms. Faulkner:

Your VPDES permit is enclosed. This permit supersedes the previous VPDES Permit VA0063029 issued to this facility. A Discharge Monitoring Report (DMR) form is included with the permit. Please make additional copies of the DMR for future use. The first DMR required by this permit for monthly monitored parameters is due on November 10, 2008 for the period October 1, 2008 through October 31, 2008. If you still have DMR data to report as required by the previous permit please submit it as an attachment to the first DMR required by this permit. Monitoring results on the DMRs should be reported to the same number of significant digits as are included in the permit limit for the parameter. Please send DMRs to:

Virginia Department of Environmental Quality
Piedmont Regional Office
4949-A Cox Road
Glen Allen, VA 23060

Note that DEQ has launched an e-DMR program that allows you to submit the effluent data electronically. If you are interested in participating in this program please visit the following website for details:

http://www.deq.virginia.gov/water/edmrfaq.html

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have thirty days from the date of service (the date you actually received this decision or the date it was mailed to you, whichever occurred first) within which to appeal this decision by filing a notice of appeal in accordance with the Rules of the Supreme Court of Virginia with the Director, Department of Environmental Quality. In the event that this decision is served on you by mail, three days are added to that period.

Alternatively, any owner under §§ 62.1 - 44.16, 62.1 - 44.17, and 62.1 - 44.19 of the State Water Control Law aggrieved by any action of the State Water Control Board taken without a

formal hearing, or by inaction of the Board, may demand in writing a formal hearing of such owner's grievance, provided a petition requesting such hearing is filed with the Board. Said petition must meet the requirements set forth in 9 VAC 25-230-130B. In cases involving actions of the Board, such petition must be filed within thirty days after notice of such action is mailed to such owner by certified mail.

If you have any questions about the permit, please call Jeremy Kazio at (804) 527-5044 or email jskazio@deq.virginia.gov

Sincerely,

Curtis J. Linderman, P.E.
Water Permits Manager

Enclosure: Permit No. VA0063029
cc: OWPP
EPA, Region III-3WP12

MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY

4949-A Cox Road Glen Allen, VA 23060 **804/527-5020**

SUBJECT: Reissuance of VPDES Permit No. VA0063029, Mizpah Nursing Home STP

TO: Curtis J. Linderman, Water Permits Manager

FROM: Jeremy Kazio, Environmental Specialist II

DATE: July 29, 2008

COPIES: OWPS, EPA

Legal Name of Owner: Mizpah Nursing Home, Inc.

Application Submitted By: Myrtle D. Faulkner
Executive Administrator, Mizpah Nursing Home, Inc.

Application Date: The application was received on March 10, 2008. The application was considered complete on March 19, 2008.

Type of Discharge: Existing Municipal discharge

Wastewater Treatment: Treatment consists of a bar screen, flow divider, 4X aeration units, 2X clarification units, chlorination, dechlorination, sludge wasting and holding chamber.

Receiving Stream:

Stream:	Rappahannock River
River Basin:	Rappahannock River
River Subbasin:	N/A
Section:	1
Class:	II
Special Standards:	a

Public Notice: The application and draft permit were given public notice according to the VPDES Permit Regulation and no comments were received.

Planning: The discharge is not addressed in any planning document but will be included when the plan is updated.

EPA Comments: EPA has waived the right to comment and/or object to the adequacy of the permit.

VDH Comments: By letter received May 2, 2008, the Virginia Department of Health stated that they had no objections to the permit.

Previous Board Action: None

Staff Comments: This permit reissuance is non-controversial. The staff believes that the attached effluent limitations will maintain the Water Quality Standards adopted by the Board.

Permit maintenance fees were last paid on August 14, 2007.

The permit was issued on September 29, 2003 and will expire on September 28, 2008.

Basis for Effluent Limits: SWCB Water Quality Standards, Best Engineering Judgement

Licensed Operator Requirements: The staff believes that a Class IV operator is required.

Staff Recommendations: The staff recommends that the Director:

1. Approve the attached effluent limitations and monitoring requirements.
2. Issue VPDES Permit No. VA0063029

APPROVED: _____
Water Permit Manager

DATE: 8/4/08

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Permit No.: VA0063029
Effective Date: September 29, 2008
Expiration Date: September 28, 2013

AUTHORIZATION TO DISCHARGE UNDER THE

VIRGINIA POLLUTION DISCHARGE ELIMINATION SYSTEM

AND

THE VIRGINIA STATE WATER CONTROL LAW

In compliance with the provisions of the Clean Water Act as amended and pursuant to the State Water Control Law and regulations adopted pursuant thereto, the following owner is authorized to discharge in accordance with the information submitted with the permit application, and with this permit cover page, Part I - Effluent Limitations and Monitoring Requirements, and Part II – Conditions Applicable To All VPDES Permits, as set forth herein.

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Owner:	Mizpah Nursing Home, Inc.
Facility Name:	Mizpah Nursing Home STP
City:	Locust Hill
County:	Middlesex
Facility Location:	74 Mizpah Road, Locust Hill, VA

The owner is authorized to discharge to the following receiving stream:

Stream:	Rappahannock River
River Basin:	Rappahannock River
River Subbasin:	N/A
Section:	1
Class:	II
Special Standards:	a

Water Permit Manager, Department of Environmental Quality

8/4/08

Date

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES)
DISCHARGE MONITORING REPORT(DMR)

Municipal Minor 08/05/2008

DEPT. OF ENVIRONMENTAL QUALITY
(REGIONAL OFFICE)
Piedmont Regional Office
4949-A Cox Road
Glen Allen VA 23060

NOTE: **READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM.**

PERMITTEE NAME/ADDRESS(INCLUDE FACILITY NAME/LOCATION IF DIFFERENT)

NAME Mizpah Nursing Home STP
ADDRESS PO Box 70
Locust Hill VA 23092
FACILITY LOCATION From SR33, north on VSH Route 634 at Locust Hill to 74 Mizpah Rd

VA0063029	001
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM				TO			

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
001 FLOW	REPORTD				*********	*********	*********				
	REQRMNT	0.020	NL	MGD	*********	*********	*********			1/DAY	EST
002 PH	REPORTD	*********	*********			*********					
	REQRMNT	*********	*********		6.0	*********	9.0	SU		1/DAY	GRAB
003 BOD5	REPORTD				*********						
	REQRMNT	2300	3400	G/D	*********	30	45	MG/L		1/6M	GRAB
004 TSS	REPORTD				*********						
	REQRMNT	2300	3400	G/D	*********	30	45	MG/L		1/3M	GRAB
006 COLIFORM, FECAL	REPORTD	*********	*********		*********		*********				
	REQRMNT	*********	*********		*********	200	*********	N/CML		2/M	GRAB
140 ENTEROCOCCI	REPORTD	*********	*********		*********		*********				
	REQRMNT	*********	*********		*********	35	*********	N/CML		2/M	GRAB
157 CL2, TOTAL CONTACT	REPORTD	*********	*********			*********	*********				
	REQRMNT	*********	*********		1.5	*********	*********	MG/L	3	1/DAY	GRAB
165 CL2, INST RES MAX	REPORTD	*********	*********		*********						
	REQRMNT	*********	*********		*********	0.013	0.016	MG/L		1/DAY	GRAB

ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS

BYPASSES AND OVERFLOWS	TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS TO THE BEST OF MY KNOWLEDGE AND BELIEF TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS. SEE 18 U.S.C. & 1001 AND 33 U.S.C. & 1319. (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)

OPERATOR IN RESPONSIBLE CHARGE			DATE		
TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	YEAR	MO.	DAY
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE			
TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.	DAY

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES)
DISCHARGE MONITORING REPORT(DMR)

Municipal Minor 08/05/2008

PERMITTEE NAME/ADDRESS(INCLUDE FACILITY NAME/LOCATION IF DIFFERENT)

NAME Mizpah Nursing Home STP
ADDRESS PO Box 70
Locust Hill VA 23092
FACILITY LOCATION From SR33, north on VSH Route 634 at Locust Hill to 74 Mizpah Rd

VA0063029	001
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM				TO			

DEPT. OF ENVIRONMENTAL QUALITY
(REGIONAL OFFICE)
Piedmont Regional Office
4949-A Cox Road
Glen Allen VA 23060

NOTE: **READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM.**

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
213 CL2, INST TECH MIN LIMIT	REPORTD	*********	*********			*********	*********				
	REQRMNT	*********	*********		0.60	*********	*********	MG/L		1/DAY	GRAB
	REPORTD										
	REQRMNT									*******	
	REPORTD										
	REQRMNT									*******	
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	REPORTD										
	REQRMNT									*******	
	REPORTD										
	REQRMNT									*******	

ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS

BYPASSES AND OVERFLOWS	TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS TO THE BEST OF MY KNOWLEDGE AND BELIEF TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS. SEE 18 U.S.C. & 1001 AND 33 U.S.C. & 1319. (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)

OPERATOR IN RESPONSIBLE CHARGE			DATE		
TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	YEAR	MO.	DAY
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE			
TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.	DAY

THIS REPORT IS REQUIRED BY LAW (33 U. S. C. § 1318 40 CFR 122.41(l)(4)(i)). FAILURE TO REPORT OR FAILURE TO REPORT TRUTHFULLY CAN RESULT IN CIVIL PENALTIES NOT TO EXCEED $10,000 PER DAY OF VIOLATION: OR IN CRIMINAL PENALTIES NOT TO EXCEED $25,000 PER DAY OF VIOLATION OR BY IMPRISONMENT FOR NOT MORE THAN FIVE YEARS, OR BOTH.

GENERAL INSTRUCTIONS

1. Complete this form in permanent ink or indelible pencil.
2. Be sure to enter the dates for the first and last day of the period covered by the report on the form in the space marked "Monitoring Period".
3. For those parameters where the "permit requirement" spaces are blank or a limitation appears, provide data in the "reported" spaces in accordance with your permit.
4. Enter the average and, if appropriate, maximum quantities and units in the "reported" spaces in the columns marked "Quantity or Loading". KG/DAY = Concentration(mg/l) x Flow(MGD) x 3.785.
5. Enter maximum, minimum, and/or average concentrations and units in the "reported" spaces in the columns marked "Quality or Concentration".
6. Enter the number of samples which do not comply with the maximum and /or minimum permit requirements in the "reported" space in the column marked "No. Ex.".
7. Enter the actual frequency of analysis for each parameter (number of times per day, week, month) in the "reported" space in the column marked "Frequency of Analysis".
8. Enter the actual type of sample collected for each parameter in the "reported" space in the column marked "Sample Type".
9. Enter additional required data or comments in the space marked "additional permit requirements or comments".
10. Record the number of bypasses during the month, the total flow in million gallons and BOD5 in kilograms in the proper columns in the section marked "Bypasses and Overflows".
11. The operator in responsible charge of the facility should review the form and sign in the space provided. If the plant is required to have a licensed operator, the operator's certificate number should be reported in the space provided.
12. The principal executive officer should then review the form and sign in the space provided and provide a telephone number where he/she can be reached.
13. You are required to sample at the frequency and type indicated in your permit.
14. Send the completed form to your Dept. of Environmental Quality Regional Office by the 10th of each month.
15. You are required to retain a copy of the report for your records.
16. Where violations of permit requirements are reported, attach a brief explanation in accordance with the permit requirements describing causes and corrective actions taken. Reference each violation by date.
17. If you have any questions, contact the Dept. of Environmental Quality Regional Office.

A. Limitations and Monitoring Requirements

During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to discharge from outfall serial number 001.

1. Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS						MONITORING REQUIREMENTS	
	MONTHLY AVERAGE		WEEKLY AVERAGE		MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow (MGD) [(a)]	NL		NA		NA	NL	1/Day	Estimate
pH (standard units)	NA		NA		6.0	9.0	1/Day	Grab
BOD_5 [(b)]	30 mg/L	2300 g/d	45 mg/L	3400 g/d	NA	NA	1/ 6 Months	Grab
Total Suspended Solids (TSS) [(b)]	30 mg/L	2300 g/d	45 mg/L	3400 g/d	NA	NA	1/ 3 Months	Grab
Dissolved Oxygen (DO) [(c)]	NA		NA		5.0 mg/L	NA	1/Day	Grab
Ammonia [(c)]	4.5 mg/L		4.5 mg/L		NA	NA	1/Month	Grab
Total Residual Chlorine (TRC)	0.013 mg/L		0.016 mg/L		NA	NA	1/Day	Grab
Fecal Coliform	200 N/ 100 ml		NA		NA	NL	2/Month (between 10am and 4pm)	Grab
Enterococci	35N/ 100 mL (Geometric Mean)		NA		NA	NL	2/Month (between 10am and 4pm)	Grab

"NL" means no limitation is established. Monitoring and reporting however, are required.
"NA" means not applicable.

(a) The design flow of this treatment facility is 0.020 MGD (20,000 gpd). See Part I.C.1 for additional flow requirements.
(b) These limitations are expressed in two significant digits.
(c) A schedule of compliance is given for these parameters as specified in Part I.B.2

2. There shall be no discharge of floating solids or visible foam in other than trace amounts.

3. Effluent samples shall be taken at Outfall 001.

4. See Part I.B for additional TRC requirements.

5. At least 85% removal for TSS and BOD_5 must be attained for this effluent.

B. Additional Limitations and Monitoring Requirements

1. Total Residual Chlorine Limitations and Monitoring Requirements Applying to the Contact Tank

   (a) The permittee shall monitor the TRC at the outlet of each operating chlorine contact tank once per day by grab sample.

   (b) No more than **3** of all samples taken at the outlet of the chlorine contact tank shall be less than **1.5 mg/L** for any one calendar month (DMR parameter 157).

   (c) No TRC sample collected at the outlet of the chlorine contact tank shall be less than **0.60 mg/L** (DMR parameter 213).

   (d) If dechlorination facilities exist the samples above shall be collected prior to dechlorination.

   If chlorine disinfection is not used, then Enterococci shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS	MONITORING REQUIREMENTS FREQUENCY	SAMPLE TYPE
Enterococci	35 N/100 mL geometric mean	1/Week	Grab (Between 10 am & 4 pm)

   The above requirements, if applicable, shall substitute for the TRC requirements delineated elsewhere in Part I.

2. Schedule of Compliance

   The permittee shall achieve compliance with the monitoring requirements and limitations for Ammonia and Dissolved Oxygen in Part I.A. in accordance with the following schedule:

1. Prepare Progress Reports	Annually from the effective date of the permit
2. Achieve Compliance with Final Effluent Limitation	Within 3 years after the effective date of the permit reissuance.

   No later than 14 calendar days following the dates identified in the above schedule of compliance, the permittee shall submit to the DEQ Regional Office, either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial action taken, and the probability of meeting the next scheduled requirement.

C. Other Requirements or Special Conditions

1. **95% Capacity Reopener:** A written notice and a plan of action for ensuring continued compliance with the terms of this permit shall be submitted to the DEQ, Piedmont Regional Office when the monthly average flow influent to the sewage treatment works reaches 95 percent of the design capacity authorized in this permit for each month of any three consecutive month period. The written notice shall be submitted within 30 days and the plan of action shall be received at the Piedmont Regional Office no later than 90 days from the third consecutive month for which the flow reached 95 percent of the design capacity. The plan shall include the necessary steps and a

prompt schedule of implementation for controlling any current or reasonably anticipated problem resulting from high influent flows. Failure to submit an adequate plan in a timely manner shall be deemed a violation of the permit.

2. **Operation and Maintenance Manual Requirement:** The permittee shall review the existing Operations and Maintenance (O & M) Manual and notify the DEQ Regional Office in writing within 90 days of the effective date of this permit whether it is still accurate and complete. If the O & M Manual is no longer accurate and complete, a revised O & M Manual shall be submitted for approval to the DEQ Regional Office within 90 days of the effective date of this permit or with the above required notification. The permittee will maintain an accurate, approved operation and maintenance manual for the treatment works. This manual shall include, but not necessarily be limited to, the following items, as appropriate:

    a. Techniques to be employed in the collection, preservation, and analysis of effluent samples (and sludge samples if sludge analyses are required);

    b. Discussion of Best Management Practices, if applicable;

    c. Treatment works design, treatment works operation, routine preventative maintenance of units within the treatment works, critical spare parts inventory and record keeping;

    d. Procedures for handling, storing, and disposing of all wastes, fluids, and pollutants characterized in Part I.C.8 that will prevent these materials from reaching state waters;

    e. Procedures for measuring and recording the duration and volume of treated wastewater discharged and;

    f. A sludge/solids disposal plan.

    Any changes in the practices and procedures followed by the permittee shall be documented and submitted for staff approval within 90 days of the effective date of the changes. Upon approval of the submitted manual changes, the revised manual becomes an enforceable part of the permit. Noncompliance with the O & M Manual shall be deemed a violation of the permit.

3. **Licensed Operator Requirement:** The permittee shall employ or contract at least one Class IV licensed wastewater works operator for this facility. The license shall be issued in accordance with Title 54.1 of the Code of Virginia and the regulations of the Board for Waterworks and Wastewater Works Operators. The permittee shall notify the Department in writing whenever he is not complying, or has grounds for anticipating he will not comply with this requirement. The notification shall include a statement of reasons and a prompt schedule for achieving compliance.

4. **Reliability Class**: The permitted treatment works shall meet Reliability Class I.

5. **Sludge Use and Disposal:** The permittee shall, within 120 days of the completion of construction of this facility submit for DEQ approval a Sludge Management Plan (SMP). The SMP shall include information on sewage sludge and biosolids sampling and testing, operational testing and control and recordkeeping necessary to document the quality and proper use and disposal of sewage sludge and biosolids. The permittee shall conduct all biosolids use and disposal activities in accordance with the approved SMP, which becomes an enforceable part of the permit upon approval.

6. **Sludge Reopener**: The Board may promptly modify or revoke and reissue this permit if any applicable standard for sewage sludge use or disposal promulgated under Section 405(d) of the Clean Water Act is more stringent than any requirements for sludge use or disposal in this permit, or controls a pollutant or practice not limited in this permit.

7. **Compliance Reporting:**

   a. Maximum quantification levels (QL's) shall be as follows:

Effluent Characteristic	Quantification Level
BOD_5	5 mg/L
TSS	1.0 mg/L
Ammonia	0.20 mg/L
Total Residual Chlorine	0.10 mg/L

   b. Reporting

   Monthly Average -- Compliance with the monthly average limitations and/or reporting requirements for the parameters listed above shall be determined as follows: All concentration data below the QL listed in a. above shall be treated as zero. All concentration data equal to or above the QL listed in a. above shall be treated as it is reported. An arithmetic average shall be calculated using all reported data for the month, including the defined zeros. This arithmetic average shall be reported on the Discharge Monitoring Report (DMR) as calculated. If all data are below the QL, then the average shall be reported as "<QL". If reporting for quantity is required on the DMR and the calculated concentration is "<QL", then report "<QL" for the quantity. Otherwise use the concentration data for each sample day to determine the daily quantity and report the average of the calculated daily quantities.

   Weekly Average --Compliance with the weekly average limitations and/or reporting requirements for the parameters listed above shall be determined as follows: All concentration data below the QL listed in a. above shall be treated as zero. All concentration data equal to or above the QL listed in a. above shall be treated as reported. An arithmetic average shall be calculated using all reported data, including the defined zeros, collected within each complete calendar week and entirely contained within the reporting month. The maximum value of the weekly averages thus determined shall be reported on the DMR. If all data are below the QL, then the average shall be reported as "<QL". If reporting for quantity is required on the DMR and the calculated concentration is "<QL", then report "<QL" for the quantity. Otherwise use the concentration data for each sample day to determine the daily quantity and report the average of the calculated daily quantities.

   c. Any single datum required shall be reported as "<QL" if it is less than the test method QL. Otherwise the numerical value shall be reported.

   d. The permittee shall report at least the same number of significant digits as the permit limit for a given parameter. Regardless of the rounding convention used (i.e. 5 always rounding up or to the nearest even number) by the permittee, the permittee shall use the convention consistently and shall ensure that consulting laboratories employed by the permittee use the same convention.

8. **Materials Storage and Handling:** Any and all product, materials, industrial wastes, and/or other wastes resulting from the purchase, sale, mining, extraction, transport, preparation, and/or storage of raw or intermediate materials, final product, by-product or wastes, shall be handled, disposed of, and/or stored in such a manner so as not to permit a discharge of such product, materials, industrial wastes, and/or other wastes to State waters, except as expressly authorized.

9. **Total Maximum Daily Load (TMDL) Reopener**: This permit shall be modified or alternatively revoked and reissued if any approved wasteload allocation procedure, pursuant to Section 303(d) of the Clean Water Act, imposes wasteload allocations, limits or conditions on the facility that are not consistent with the permit requirements.

10. **Indirect Dischargers:** The permittee shall provide adequate notice to the Department of the following:
    a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Section 301 or 306 of Clean Water Act and the State Water Control Law if it were directly discharging those pollutants; and
    b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of this permit.

    Adequate notice shall include information on (i) the quality and quantity of effluent introduced into the treatment works, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the treatment works.

11. **CTC, CTO Requirement**: The permittee shall, in accordance with the DEQ Sewage Collection and Treatment Regulation (9VAC 25-790), obtain a Certificate to Construct (CTC), and a Certificate to Operate (CTO) from the DEQ prior to constructing wastewater treatment works and operating the treatment works, respectively. Non-compliance with the CTC or CTO shall be deemed a violation of the permit.

12. **Effluent Monitoring Frequencies:** If the facility permitted herein is issued a Notice of Violation for any of the parameters listed below, then the following effluent monitoring frequencies shall become effective upon written notice from DEQ and remain in effect until permit expiration.

TSS	1/Month	Grab
BOD_5	1/Month	Grab

No other effluent limitations or monitoring requirements are affected by this special condition.

CONDITIONS APPLICABLE TO ALL VPDES PERMITS

A. Monitoring

1. Samples and measurements taken as required by this permit shall be representative of the monitored activity.

2. Monitoring shall be conducted according to procedures approved under Title 40 Code of Federal Regulations Part 136 or alternative methods approved by the U.S. Environmental Protection Agency, unless other procedures have been specified in this permit.

3. The permittee shall periodically calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals that will insure accuracy of measurements.

B. Records

1. Records of monitoring information shall include:
   a. The date, exact place, and time of sampling or measurements;
   b. The individual(s) who performed the sampling or measurements;
   c. The date(s) and time(s) analyses were performed;
   d. The individual(s) who performed the analyses;
   e. The analytical techniques or methods used; and
   f. The results of such analyses.

2. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years, the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period of retention shall be extended automatically during the course of any unresolved litigation regarding the regulated activity or regarding control standards applicable to the permittee, or as requested by the Board.

C. Reporting Monitoring Results

1. The permittee shall submit the results of the monitoring required by this permit not later than the 10th day of the month after monitoring takes place, unless another reporting schedule is specified elsewhere in this permit. Monitoring results shall be submitted to:

   DEQ - Piedmont Regional Office
   4949-A Cox Road
   Glen Allen, VA 23060

2. Monitoring results shall be reported on a Discharge Monitoring Report (DMR) or on forms provided, approved, or specified by the Department.

3. If the permittee monitors any pollutant specifically addressed by this permit more frequently than required by this permit using test procedures approved under Title 40 of the Code of Federal Regulations Part 136 or using other test procedures approved by the U.S. Environmental Protection Agency or using procedures specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or reporting form specified by the Department.

4. Calculations for all limits which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.

D. Duty to Provide Information

The permittee shall furnish to the Department, within a reasonable time, any information which the Board may request to determine whether cause exists for modifying, revoking and reissuing,

or terminating this permit or to determine compliance with this permit. The Board may require the permittee to furnish, upon request, such plans, specifications, and other pertinent information as may be necessary to determine the effect of the wastes from his discharge on the quality of state waters, or such other information as may be necessary to accomplish the purposes of the State Water Control Law. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

E. Compliance Schedule Reports

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

F. Unauthorized Discharges

Except in compliance with this permit, or another permit issued by the Board, it shall be unlawful for any person to:

1. Discharge into state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances; or

2. Otherwise alter the physical, chemical or biological properties of such state waters and make them detrimental to the public health, or to animal or aquatic life, or to the use of such waters for domestic or industrial consumption, or for recreation, or for other uses.

G. Reports of Unauthorized Discharges.

Any permittee who discharges or causes or allows a discharge of sewage, industrial waste, other wastes or any noxious or deleterious substance into or upon state waters in violation of Part II F 1; or who discharges or causes or allows a discharge that may reasonably be expected to enter state waters in violation of Part II F 1, shall notify the Department of the discharge immediately upon discovery of the discharge, but in no case later than 24 hours after said discovery. A written report of the unauthorized discharge shall be submitted to the Department, within five days of discovery of the discharge. The written report shall contain:

1. A description of the nature and location of the discharge;

2. The cause of the discharge;

3. The date on which the discharge occurred;

4. The length of time that the discharge continued;

5. The volume of the discharge;

6. If the discharge is continuing, how long it is expected to continue;

7. If the discharge is continuing, what the expected total volume of the discharge will be; and

8. Any steps planned or taken to reduce, eliminate and prevent a recurrence of the present discharge or any future discharges not authorized by this permit. Discharges reportable to the Department under the immediate reporting requirements of other regulations are exempted from this requirement.

H. Reports of Unusual or Extraordinary Discharges

If any unusual or extraordinary discharge including a bypass or upset should occur from a treatment works and the discharge enters or could be expected to enter state waters, the permittee shall promptly notify, in no case later than 24 hours, the Department by telephone after the discovery of the discharge. This notification shall provide all available details of the incident, including any adverse affects on aquatic life and the known number of fish killed. The permittee shall reduce the report to writing and shall submit it to the Department within five days of discovery of the discharge in accordance with Part II I 2. Unusual and extraordinary discharges include but are not limited to any discharge resulting from:

1. Unusual spillage of materials resulting directly or indirectly from processing operations;

2. Breakdown of processing or accessory equipment;

3. Failure or taking out of service some or all of the treatment works; and

4. Flooding or other acts of nature.

I. Reports of Noncompliance

The permittee shall report any noncompliance which may adversely affect state waters or may endanger public health.

1. An oral report shall be provided within 24 hours from the time the permittee becomes aware of the circumstances. The following shall be included as information which shall be reported within 24 hours under this paragraph:
   a. Any unanticipated bypass; and
   b. Any upset which causes a discharge to surface waters.

2. A written report shall be submitted within 5 days and shall contain:
   a. A description of the noncompliance and its cause;
   b. The period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and
   c. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

   The Board may waive the written report on a case-by-case basis for reports of noncompliance under Part II I. if the oral report has been received within 24 hours and no adverse impact on state waters has been reported.

3. The permittee shall report all instances of noncompliance not reported under Parts II I.1 or 2, in writing, at the time the next monitoring reports are submitted. The reports shall contain the information listed in Part II I.2.

NOTE: The immediate (within 24 hours) reports required in Parts II G, H and I may be made to the Department's Regional Office at (804) 527-5020 or fax (804) 527-5106. For reports outside normal working hours, leave a message and this shall fulfill the immediate reporting requirement. For emergencies, the Virginia Department of Emergency Services maintains a 24 hour telephone service at 1-800-468-8892.

J. Notice of Planned Changes

1. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:
   a. The permittee plans alteration or addition to any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:
      (1) After promulgation of standards of performance under Section 306 of Clean Water Act which are applicable to such source; or
      (2) After proposal of standards of performance in accordance with Section 306 of Clean Water Act which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal;

   b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations nor to notification requirements specified elsewhere in this permit; or

   c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the

application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

2. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

K. Signatory Requirements

1. Applications. All permit applications shall be signed as follows:
   a. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulation; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

   b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

   c. For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a public agency includes: (i) The chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

2. Reports, etc. All reports required by permits, and other information requested by the Board shall be signed by a person described in Part II K 1, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
   a. The authorization is made in writing by a person described in Part II K 1;

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and

   c. The written authorization is submitted to the Department.

3. Changes to authorization. If an authorization under Part II K 2 is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part II K 2 shall be submitted to the Department prior to or together with any reports, or information to be signed by an authorized representative.

4. Certification. Any person signing a document under Parts II K 1 or 2 shall make the following certification:
   "I certify under penalty of law that this document and all attachments were prepared

under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

L. Duty to Comply

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the State Water Control Law and the Clean Water Act, except that noncompliance with certain provisions of this permit may constitute a violation of the State Water Control Law but not the Clean Water Act. Permit noncompliance is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if this permit has not yet been modified to incorporate the requirement.

M. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall apply for and obtain a new permit. All permittees with a currently effective permit shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Board. The Board shall not grant permission for applications to be submitted later than the expiration date of the existing permit.

N. Effect of a Permit

This permit does not convey any property rights in either real or personal property or any exclusive privileges, nor does it authorize any injury to private property or invasion of personal rights, or any infringement of federal, state or local law or regulations.

O. State Law

Nothing in this permit shall be construed to preclude the institution of any legal action under, or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any other state law or regulation or under authority preserved by Section 510 of the Clean Water Act. Except as provided in permit conditions on "bypassing" (Part II U), and "upset" (Part II V) nothing in this permit shall be construed to relieve the permittee from civil and criminal penalties for noncompliance.

P. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Sections 62.1-44.34:14 through 62.1-44.34:23 of the State Water Control Law.

Q. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes effective plant performance, adequate funding, adequate licensed operator staffing, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

R. Disposal of Solids or Sludges

Solids, sludges or other pollutants removed in the course of treatment or management of pollutants shall be disposed of in a manner so as to prevent any pollutant from such materials from entering state waters.

S. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

T. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

U. Bypass

1. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. The permittee may allow any bypass to occur which does not cause effluent limits to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Parts II U 2 and U 3.

2. Notice
   a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, prior notice shall be submitted, if possible at least ten days before the date of the bypass.
   b. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Part II I.

3. Prohibition of bypass.
   a. Bypass is prohibited, and the Board may take enforcement action against a permittee for bypass, unless:
      (1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
      (2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
      (3) The permittee submitted notices as required under Part II U 2.

   b. The Board may approve an anticipated bypass, after considering its adverse effects, if the Board determines that it will meet the three conditions listed above in Part II U 3 a.

V. Upset

1. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limits if the requirements of Part II V 2 are met. A determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is not a final administrative action subject to judicial review.

2. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
   a. An upset occurred and that the permittee can identify the cause(s) of the upset;
   b. The permitted facility was at the time being properly operated; and
   c. The permittee submitted notice of the upset as required in Part II I 2.

d. The permittee complied with any remedial measures required under Part II S.

3. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

W. Inspection and Entry

The permittee shall allow the Director, or an authorized representative, upon presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act and the State Water Control Law, any substances or parameters at any location.

For purposes of this section, the time for inspection shall be deemed reasonable during regular business hours, and whenever the facility is discharging. Nothing contained herein shall make an inspection time unreasonable during an emergency.

X. Permit Actions

Permits may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

Y. Transfer of Permits

1. Permits are not transferable to any person except after notice to the Department. Except as provided in Part II Y 2, a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued, or a minor modification made, to identify the new permittee and incorporate such other requirements as may be necessary under the State Water Control Law and the Clean Water Act.

2. As an alternative to transfers under Part II Y 1, this permit may be automatically transferred to a new permittee if:
   a. The current permittee notifies the Department at least 30 days in advance of the proposed transfer of the title to the facility or property;
   b. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and
   c. The Board does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in Part II Y 2 b.

Z. Severability

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

VPDES PERMIT FACT SHEET

This document gives pertinent information concerning the reissuance of the VPDES permit listed below. This permit is being processed as a minor, municipal permit. The effluent limitations contained in this permit will maintain the Water Quality Standards of 9 VAC 25-260 et seq. The discharge results from the proposed operation of a private wastewater treatment facility treating sewage generated from the operation of a convalescent care center. This permit action includes revised effluent limitations and special conditions in the permit.

1. Facility Name and Address: Mizpah Nursing Home STP
P.O. Box 70
Locust Hill, VA 23092

Location: 74 Mizpah Road, Locust Hill, VA

2. SIC Code: 4952, 8051

3. Permit No. VA0063029 Permit Expiration Date: September 28, 2008

4. Owner Contact: Mizpah Nursing Home, INC
Name: Myrtle D. Faulkner
Title: Executive Administrator
Telephone No.: 804/758-5260
Address: P.O. Box 70, Locust Hill, VA 23092

5. Application Complete Date: March 19, 2008
Permit Drafted By: Jeremy Kazio Date: March 14, 2008

DEQ Regional Office: Piedmont Regional Office

Reviewed By: Denise Mosca Date: March 24, 2008
Ray Jenkins Date: May 1, 2008

6. Receiving Stream:

Name:	Rappahannock River
River Mile:	3-RRP013.71
Basin:	Rappahannock River
Subbasin:	N/A
Section:	1
Class:	II
Special Standards:	a

1-Day, 10-Year Low Flow:	These flow rates are undefined for tidal water bodies.
7-Day, 10-Year Low Flow:	
30-Day, 5-Year Low Flow:	
Harmonic Mean Flow:	

Tidal?: Yes
On 303(d) list?: Yes

7. Operator License Requirements: Class IV
The recommended attendance hours by a licensed operator and the minimum daily hours that the treatment works should be manned by operating staff are contained in the Sewage Collections and Treatment Regulations (SCAT) 9 VAC 25-790-300. A class IV licensed operator is required for this facility.

8. Reliability Class: Class I
Reliability is a measurement of the ability of a component or system to perform its designated function without failure or interruption of service. The reliability classification is based on the water quality and public health consequences of a component or system failure. The permittee is required to maintain Class I Reliability for this facility.

9. Permit Characterization:

( ) Issuance
(X) Reissuance
( ) Revoke & Reissue
( ) Owner Modification
( ) Board Modification
( ) Change of Ownership/Name
Effective Date:
(X) Municipal
SIC Code(s): 4952,8051
( ) Industrial
SIC Code(s):
( ) POTW
(X) PVOTW
(X) Private
( ) Federal
( ) State

(X) Existing Discharge
( ) Proposed Discharge
(X) Effluent Limited
(X) Water Quality Limited
( ) WET Limit
( ) Interim Limits in Permit
( ) Interim Limits in Other Document (attached)
(X) Compliance Schedule Required
( ) Site Specific WQ Criteria
( ) Variance to WQ Standards
( ) Water Effects Ratio
(X) Discharge to 303(d) Listed Segment
( ) Toxics Management Program Required
( ) Toxics Reduction Evaluation
( ) Possible Interstate Effect
( ) Storm Water Management Plan

10. Wastewater Flow and Treatment: Table 1

Outfall Number	Wastewater Source	Treatment	Flow
001	Bathrooms and food preparation serving a convalescent care center with an approximate population of 150 persons	Bar screen, flow divider, 4X aeration units, 2X clarification units, chlorination, dechlorination, sludge wasting and holding chamber	20,000 gpd (0.020 MGD) design capacity

See **Attachment A** for a facility diagram.

11. Sludge Disposal: Waste sludge is held in a holding tank and disposed of by a licensed contract hauler as needed.

12. Discharge Location Description: This facility discharges to the Rappahannock River.
Name of USGS topo map: Saluda Topo 123(D) (See **Attachment B**)

13. Material Storage: Chemicals used for the wastewater plant are stored in proper containers and under roof cover.

14. Ambient Water Quality Information:
This facility discharges directly to the Rappahannock River at River Mile 3-RPP013.71. Stream flow data cannot be determined because the Rappahannock River is considered a tidal waterbody (See **Attachment C** for Flow Frequency Analysis Memorandum by Jennifer V. Palmore, P.G. dated March 11, 2008). Ambient stream data were collected at station ID 3-RPP010.60, located approximately 3 miles downstream of the discharge. These data were used to determine 90%tile and 10%tile values for pH and temperature, as well as the mean salinity levels required in establishing water quality based effluent limitations. This area of the Rappahannock River was assessed as a Category 5A water during the 2006 305(b)/303(d) assessment cycle.

15. Antidegradation Review and Comments:
The State Water Control Board's Water Quality Standards includes an antidegradation policy (9 VAC 25-260-30). All state surface waters are provided one of three levels of antidegradation protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect those uses must be maintained. Tier 2 water bodies have water quality that is better than the water quality

standards. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 water bodies are exceptional waters and are so designated by regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters.

The antidegradation review begins with a Tier determination. The receiving stream for Outfall 001 (Rappahannock River) is considered a Tier 1 water due to its inclusion on the recent 303(d) listing for estuarine bioassessments attributed to low dissolved oxygen.

16. Site Inspection: 5 March 2008 by Heather A. Horne. See **Attachment D.**

17. Effluent Screening & Limitation Development:
See **Attachment E** which presents the evaluations for several pollutants of concern. Included in Attachment E are the MSTRANTI printout with WLAs, and STATS v2.0.4 analyses for ammonia and TRC.

18. Effluent Limitation Development: Table 2

PARAMETER	BASIS FOR LIMITS	DISCHARGE LIMITS				MONITORING REQUIREMENTS	
		MO AVG	WE AVG	MIN	MAX	FREQ	SAMP TYPE
Flow	NA	NL – monitoring only		NA	NL	1/Day	Estimate
pH	1	NA	NA	6.0 su	9.0 su	1/Day	Grab
BOD_5	2	30 mg/L (2300 g/d)	45 mg/L (3400 g/d)	NA	NA	1/ 6 Months	Grab
TSS	2	30 mg/L (2300 g/d)	45 mg/L (3400 g/d)	NA	NA	1/ 3 Months	Grab
TRC	3	0.013 mg/L	0.016 mg/L	NA	NA	1/Day	Grab
Ammonia	3	4.5 mg/L	4.5 mg/L	NA	NA	1/Month	Grab
Fecal Coliform	3	200 N/100 ml	NA	NA	NL	2/Month (10am-4pm)	Sterile Grab
Dissolved Oxygen (DO)	3	NA	NA	5.0 mg/L	NA	1/Day	Grab
Enterococci	3	35 N/100 ml Geo. Mean	NA	NA	NA	2/Month (10am-4pm)	Sterile Grab

1. Water Quality Standards
2. Federal Effluent Guidelines for Secondary Treatment
3. Water Quality Based Effluent Limitations

- **New Limitations for Ammonia and TRC (Additional Information):**

A limitation evaluation begins by determining chronic and acute wasteload allocations (WLA's) using the MSTRANTI Excel Spreadsheet. MSTRANTI produces WLA's using data inputs determined by the permit writer and the Virginia Water Quality Standards (9 VAC 25-260 et. seq.). Once determined, the chronic and acute WLA's are entered into the STATS 2.0.4 computer application along with the appropriate quantification level (QL) and at least one data point. The output from the STATS 2.0.4 application will indicate the need for a permit limitation and calculate that limitation if needed. For Ammonia and TRC, GM 00-2011 requires that a concentration of 9.0 mg/L and 20 mg/L, respectively, be entered into STATS 2.0.4 as a data point in order to force the program to produce a limit for Ammonia and TRC if the WLA's are low enough that one is needed.

- **Other Limitation Rationale for BOD_5, TSS, DO, and Bacteria (Additional Information)**

  BOD_5 and TSS: 40 CFR Part 133 specifies technology-based limits for the minimum level of treatment that must be met through the application of secondary treatment. In general the discharge must fall within the pH range of 6.0 and 9.0 and meet BOD_5 and TSS limits of 30 mg/l monthly average and 45 mg/l weekly average. These limitations represent the minimum effluent quality required of all PVOTWs. Additionally, the guidelines require 85% removal for BOD_5 and TSS, pertaining to the monthly average concentration.

  Dissolved Oxygen (DO): This effluent limitation is based on dissolved oxygen criteria for the Chesapeake Bay and its tidal tributaries that were developed during the 2006 305(b)/303(d) Water Quality Assessments cycle. The mesohaline Rappahannock River estuary was considered impaired of the Open Water summer DO criteria. The estuarine system shows evidence of depletion, therefore, the DO limit has been be applied to more adequately protect the receiving waters within the immediate area of this facility's discharge point.

  Fecal Coliform: For sewage discharges to shellfish waters, permits limit fecal coliform with an effluent limit of 200 per 100 milliliters, applied as a monthly average. Although the Water Quality Standards have been amended to remove the reference to this effluent limit in shellfish waters, the Virginia Department of Health, Bureau of Shellfish Sanitation still uses fecal coliform as an indicator for determining the quality of shellfish waters, and it is necessary to ensure discharges meet this level. Since it has historically maintained the in-stream water quality criteria for fecal coliform of 14/43 per 100 milliliters, the 200 per 100 milliliters effluent limit will be used in shellfish waters in order to continue meeting the in-stream criteria and for protection of shellfish under the general standard

  Enterococci: An enterococci limitation of 35N/100mL is prescribed for discharges into saltwater or transition zones (9 VAC 25-260-170.A.2). The disinfection policy of 9 VAC 25-260-170.B (Water Quality Standards) requires that all effluents attain the applicable bacteria concentrations prior to discharge. In the absence of chlorine disinfection, enterococci should be limited and monitored once per week.

19. Basis for Sludge Use & Disposal Requirements: Not applicable, as this facility does not land apply sludge.

20. Antibacksliding: All limitations in the 2008 permit are the same or more stringent than the limitations in the 2002 permit. Note that the TRC limitation is now expressed in two significant digits whereas the current permit uses one. As the limitation itself has not changed, merely the expression of this limit, antibacksliding has not been violated.

21. Total Residual Chlorine Limitations and Monitoring Requirements – Part I.B.1
These limitations and monitoring are required by the Water Quality Standards, 9 VAC 25-260-170 – Bacteria; other waters. Also, 40 CFR 122.41(e) requires the permittee, at all times, to properly operate and maintain all facilities and systems of treatment in order to comply with the permit. This ensures proper operation of chlorination equipment to maintain adequate disinfection.

22. Compliance Schedule – Part I.B.2
The VPDES Permit Regulation at 9 VAC 25-31-250 allows for schedules that will lead to compliance with the Clean Water Act, the State Water Control Law, and regulations promulgated under them.

23. Special Conditions – Part I.C:
    a. Special Condition C.1 – 95% Capacity Reopener
    Rationale: Required by VPDES Permit Regulation, 9 VAC 25-31-200 B 2 for all POTW and PVOTW permits.

b. Special Condition C.2 – O&M Manual Requirement
Rationale: Required by Code of Virginia §62.1-44.19; Sewage Collection and Treatment Regulations, 9 VAC 25-790; VPDES Permit Regulation, 9 VAC 25-31-190 E.

c. Special Condition C.3 – Licensed Operator Requirement
Rationale: The VPDES Permit Regulation, 9 VAC 25-31-200 C and the Code of Virginia § 54.1-2300 et seq., Rules and Regulations for Waterworks and Wastewater Works Operators (18 VAC 160-20-10 et seq.), require licensure of operators.

d. Special Condition C.4. – Reliability Class
Rationale: Required by Sewage Collection and Treatment Regulations, 9 VAC 25-790 for all municipal facilities.

e. Special Condition C.5 – Sludge Use and Disposal
Rationale: VPDES Permit Regulation, 9 VAC 25-31-100 P; 220 B 2; and 420 through 720, and 40 CFR Part 503 require all treatment works treating domestic sewage to submit information on sludge use and disposal practices and to meet specified standards for sludge us and disposal.

f. Special Condition C.6. – Sludge Reopener
Rationale: Required by VPDES Permit Regulation, 9 VAC 25-31-220 C 4 for all permits issued to treatment works treating domestic sewage.

g. Special Condition C.7 – Compliance Reporting
Rationale: Authorized by VPDES Permit Regulation, 9 VAC 25-31-190 J 4 and 220 I. This condition is necessary when pollutants are monitored by the permittee and a maximum level of quantification and/or a specific analytical method is required in order to assess compliance with a permit limitation or to compare effluent quality with a numeric criterion. The condition also establishes protocols for calculation of reported values.

h. Special Condition C.8 – Materials Handling/Storage
Rationale: 9 VAC 25-31-50 A prohibits the discharge of any wastes into State waters unless authorized by permit. Code of Virginia §62.1-44.16 and 62.1-44.17 authorizes the Board to regulate the discharge of industrial waste or other waste.

i. Special Condition C.9 – Section 303(d) List (TMDL) Reopener
Rationale: Section 303(d) of the Clean Water Act requires that total maximum daily loads (TMDLs) be developed for streams listed as impaired. This special condition is to allow the permit to be reopened if necessary to bring it into compliance with any applicable TMDL approved for the receiving stream. The re-opener recognizes that, according to section 402(o)(1) of the Clean Water Act, limits and/or conditions may be either more or less stringent than those contained in this permit. Specifically, they can be relaxed if they are the result of a TMDL, basin plan, or other wasteload allocation prepared under section 303 of the Act. The TMDL reopener special condition is being included in all VPDES permits.

j. Special Condition C. 10—Indirect Dischargers
Rationale: Required by VPDES Permit Regulation, 9 VAC 25-31-200 B.1. and B.2. for POTWs and PVOTWs that receive waste from someone other than the owner of the treatment works.

k. Special Condition C. 11 – CTO, CTC Requirement
Rationale: Required by Code of Virginia § 62.1-44.19; Sewage Collection and Treatment Regulations, 9 VAC 25-790.

l. Special Condition C. 12 - Effluent Monitoring Frequencies
Rationale: Permittees are granted a reduction in monitoring frequency based on a history of permit compliance. To remain eligible for the reduction, the permittee should not have violations

related to the effluent limits for which reduced frequencies were granted. If permittees fail to maintain the previous level of performance, the baseline monitoring frequencies should be reinstated for those parameters that were previously granted a monitoring frequency reduction.

24. Part II, Conditions Applicable to All VPDES Permits
The VPDES Permit Regulation at 9 VAC 25-31-190 requires all VPDES permits to contain or specifically cite the conditions listed.

25. Changes to Current Permit

Table 3: Permit Processing Change Sheet

Parameter Changed	Effluent Limits Changed		Monitoring Requirement Changed		Reason for Change	Date
	From	To	From	To		
Dissolved Oxygen (DO)	--	Minimum 5.0 mg/L	--	1/Day	A limitation was determined to be required for each of these parameters. See Part 15 of this fact sheet for information regarding the new DO limit. See Part 18 of this fact sheet for additional information concerning limitation development procedures for Ammonia.	3/08
Ammonia	--	Monthly Average 4.5 mg/L	--	1/Month		
		Weekly Average 4.5 mg/L				
TRC Monthly Average	0.01 mg/L	0.013 mg/L	1/Day	No Change	Concentration and loading limitations were revised in accordance with GM06-2016. For additional information concerning TRC limitation development, please see the STATS 2.0.4 output page for TRC in **Attachment E** of this fact sheet. Monitoring requirements for TSS and BOD_5 were relaxed – An evaluation was conducted to determine if a monitoring frequency reduction was possible for this reissuance. The new monitoring frequency reflects the maximum reduction allowed by current agency guidance (See **Attachment E**).	
TRC Weekly Average	0.02 mg/L	0.016 mg/L				
TSS Monthly Average	30 mg/L	No Change	1/Month	1/ 3 Months		
	2.3 kg/d	2300 g/d				
TSS Weekly Average	45 mg/L	No Change				
	3.4 kg/d	3400 g/d				
BOD_5 Monthly Average	30 mg/L	No Change	1/Month	1/ 6 Months		3/08
	2.3 kg/d	2300 g/d				
BOD_5 Weekly Average	45 mg/L	No Change				
	3.4 kg/d	3400 g/d				
Fecal Coliform	200 N/100 mL (Geometric Mean)	200 N/100 mL	1/Month (between 10 am and 4 pm)	2/Month (between 10 am and 4 pm)	In accordance with current agency guidance (Permit Manual), permits are to continue to limit fecal coliform with an effluent limit of 200 per 100 milliliters, applied as a **monthly average**. The fecal coliform monitoring frequency has also been changed in accordance with current agency guidance.	
Enterococci	--	35 N/100 mL (Geometric Mean)	--	2/Month (between 10 am and 4 pm)	Guidance memo #03-2007 augmented the fecal coliform criteria with the addition of Enterococci criteria as the standard for proof of disinfection when the discharge is to saltwater or transition zones	

Table 3: Permit Processing Change Sheet (continued)

From	To	Special Condition Changed	Reason for Change	Date
At the end of VSH 634 in Locust Hill, Virginia	74 Mizpah Road, Locust Hill, VA	Cover Page: Facility Location	The 2003 application for reissuance did not include a 911 address. The 2008 application for reissuance included a 911 address.	3/08
Part I.A.1.a	Part I.A.1(a)	Design Flow	No changes	
--	Part I.A.1(b)	Significant digits	New, reflects current agency guidance	
--	Part I.A.1(c)	Compliance Schedule	New, reflects current agency guidance (also see Item 22 above)	
Part I.A.1.e	Part I.A.2	Discharge of floating solids/foam	No changes	
--	Part I.A.3	Sample location	New, reflects current agency policy	
Part I.A.1.c	Part I.A.4	TRC Requirements	The compliance schedule no longer applies for the 2008 permit reissuance, therefore the wording has been changed accordingly.	
Part I.A.1.d	Part I.A.5	85% Removal for BOD_5 & TSS	No changes	
Part I.B	Part I.B	Additional Limitations and Monitoring Requirements	Revised to reflect current agency guidance; the bacteria standard has changed with the addition of Enterococci. The minimum TRC limit of 0.60 mg/L from the outlet of the chlorination tank has been revised to reflect GM06-2016 A schedule of compliance for new effluent limitations for Ammonia and Dissolved Oxygen has been established in accordance with agency guidance.	
Part I.C.1	Part I.C.1	95% Capacity Notification	No changes	
Part I.C.2	Part I.C.2	O & M Manual	Revised to reflect current agency guidance	
Part I.C.3	Part I.C.3	Licensed Operator	No changes	
Part I.C.6	Part I.C.4	Reliability Class	No changes	
Part I.C.8	Part I.C.5	Sludge Use and Disposal	Revised wording to reflect current agency guidance	
Part I.C.9	Part I.C.6	Sludge Reopener	No changes	
Part I.C.10	Part I.C.7	Compliance Reporting	Revised to reflect current agency guidance and revised effluent limitations.	3/08
Part I.C.12	Part I.C.8	Materials Handling/Storage	No changes	
Part I.C.13	Part I.C.9	TMDL Reopener	No changes	
Part I.C.7	Part I.C.10	Indirect Dischargers	No changes	
--	Part I.C.11	CTC, CTO Requirement	New, reflects current agency guidance	
--	Part I.C.12	Effluent Monitoring Frequencies	New, reflects current agency guidance	
NEW-16	(deleted)	Cover Page Special Standards	On the cover page, the NEW-16 Special Standard was deleted due to revisions in the Water Quality Standards. Cover page format has also changed.	
Part I.D.	(deleted)	Bacterial Effluent Limitations and Monitoring Requirements – Additional Instructions	No longer applicable – The demonstration was not completed by September 29, 2004 as directed in the 2003 permit reissuance, and therefore, the Enterococci limitation is now in effect.	
Part I.E.	(deleted)	Schedule of Compliance for Final Total Residual Chlorine (TRC) Limitations	No longer applicable – Final effluent limitations for TRC became effective on September 29, 2007	
Part I.A.1.b	(deleted)	Compliance Reporting Reference	No longer required per current agency guidance (Permit Manual)	
Part I.C.4.	(deleted)	Nutrient Reopener	No longer required per current agency guidance (PRO VPDES Staff decision)	

From	To	Special Condition Changed	Reason for Change	Date
Part I.C.5	(deleted)	Water Quality Criteria Reopener	No longer required per current agency guidance (Permit Manual)	3/08
Part I.C.11	(deleted)	Closure Plan	Closure of treatment works are covered by the SCAT regulations, therefore the Closure Plan requirement has been removed.	

26. Variances/Alternate Limits or Conditions: None.

27. Public Notice Information required by 9 VAC 25-31-280 B:

Comment period: Start Date: June 20, 2008 End Date: July 22, 2008
Published Dates: June 19, 2008 & June 26, 2008

All pertinent information is on file and may be inspected or copied by contacting Jeremy Kazio at:
Virginia Department of Environmental Quality (DEQ)
Piedmont Regional Office
4949-A Cox Road
Glen Allen, Virginia 23060-6296

Telephone Number 804/527-5044
Facsimile Number 804/527-5106
Email jskazio@deq.virginia.gov

Persons may comment in writing or by e-mail to the DEQ on the proposed reissuance of the permit, and may request a public hearing, during the comment period. Comments shall include the name, address, and telephone number of the writer, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within the comment period will be considered. The DEQ may decide to hold a public hearing if public response is significant. Requests for public hearings shall state the reason why a hearing is requested, the nature of the issues proposed to be raised in the public hearing, and a brief explanation of how the requester's interests would be directly and adversely affected by the proposed permit action.

Following the comment period, the Board will make a determination regarding the proposed reissuance. That determination will become effective, unless the DEQ grants a public hearing. Due notice of any public hearing will be given.

28. 303(d) Listed Segments (TMDL) –Rappahannock River

The mainstem of the Rappahannock River from Myrtle Swamp to its mouth was originally listed in 1998 by DEQ due to dissolved oxygen violations and nutrient overenrichment; the EPA later extended the segment upstream to the confluence with Totusky Creek. The new Chesapeake Bay Water Quality Standards were implemented during the 2006 cycle, and the mesohaline portion of the Rappahannock failed the Open Water Subuse's summer 30-day dissolved oxygen criteria and the Shallow Water Subuse's submerged aquatic vegetation acreage standards. The TMDL is due by 2010; however tributary strategies have been developed to address the impairment.

The 2008 permit reissuance has a minimum dissolved oxygen limitation of 5.0 mg/L and, in accordance with 9 VAC 25-260-185 A, this limitation should provide adequate protection of the Open Water Criteria (See **Attachment C** for ambient stream data and mean salinity levels). The 2008 reissuance also limits BOD_5 to levels that are not expected to cause further detriment to the dissolved oxygen levels in the Rappahannock River. The permit contains a re-opener condition that may allow these limits to be modified, in compliance with section 303(d)(4) of the Act, once a TMDL is approved.

29. Additional Comments:

a. Previous Board Action: None.

b. Staff Comments:

- Financial assurance does not apply to this facility. Whenever there is a privately owned treatment plant discharging between 1,000 gpd and 40,000 gpd incorporating private residences (i.e. homes, duplexes, mobile homes, apartments, etc.), a form of Financial Assurance must be in place. This concept applies to any privately owned facility where the interruption of sewer service would make it such that residents served by that facility could no longer occupy their permanent home. Since this facility does not provide sanitary services to any **permanent** residences (according to the owner), the need for DEQ to ensure a temporary continuation of services does not exist, and thus, neither does the need for financial assurance.

- The Dissolved Oxygen (DO) standards in 9 VAC 25- 260-185 include an instantaneous minimum of 4.3 mg/L and a 30 day average of 5.0 mg/L for open water designated uses and providing tidal habitats with greater than 0.5 ppt salinity levels. The current DO limitation in this permit, 5.0 mg/L minimum, adequately addresses both standards.

- The Mizpah Nursing Home treatment facility is an existing discharger with a design capacity of 20,000 gallons per day (and is not planning on expanding), and was issued a CTO before July 1, 2005. Therefore, this facility is not considered a significant discharger under the Code of Virginia § 62.1-44.19:19:14.C.5 for existing dischargers, and consequently is not subject to coverage under the *General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia (9 VAC 25-820)*.

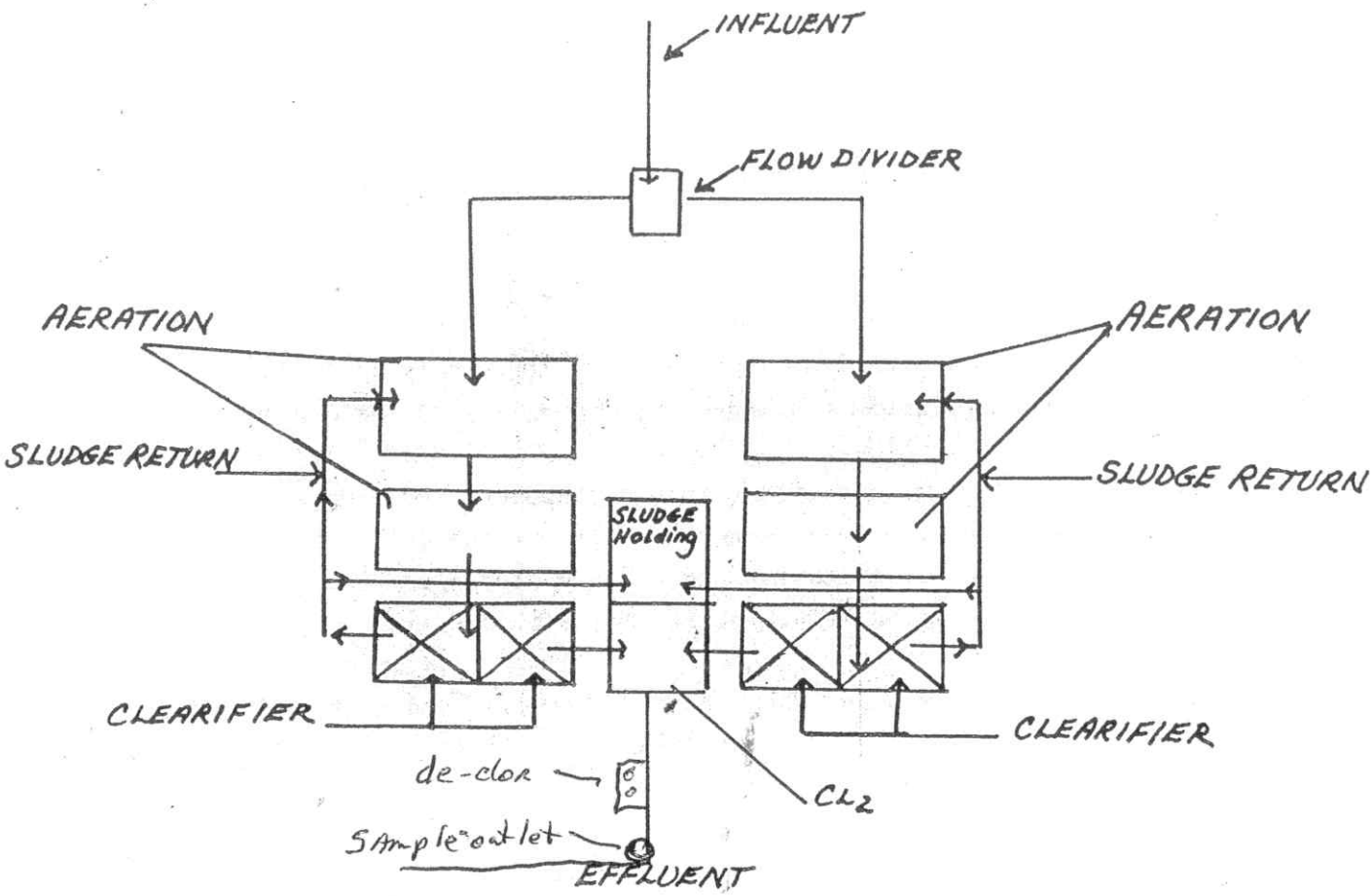
c. Public Comment: None

30. Summary of attachments to this Fact Sheet:

Attachment A	Facility Diagram
Attachment B	Location Map
Attachment C	Ambient Stream Data
Attachment D	Site Inspection Report
Attachment E	Effluent Limitation Evaluations

Attachment A

Facility Diagram



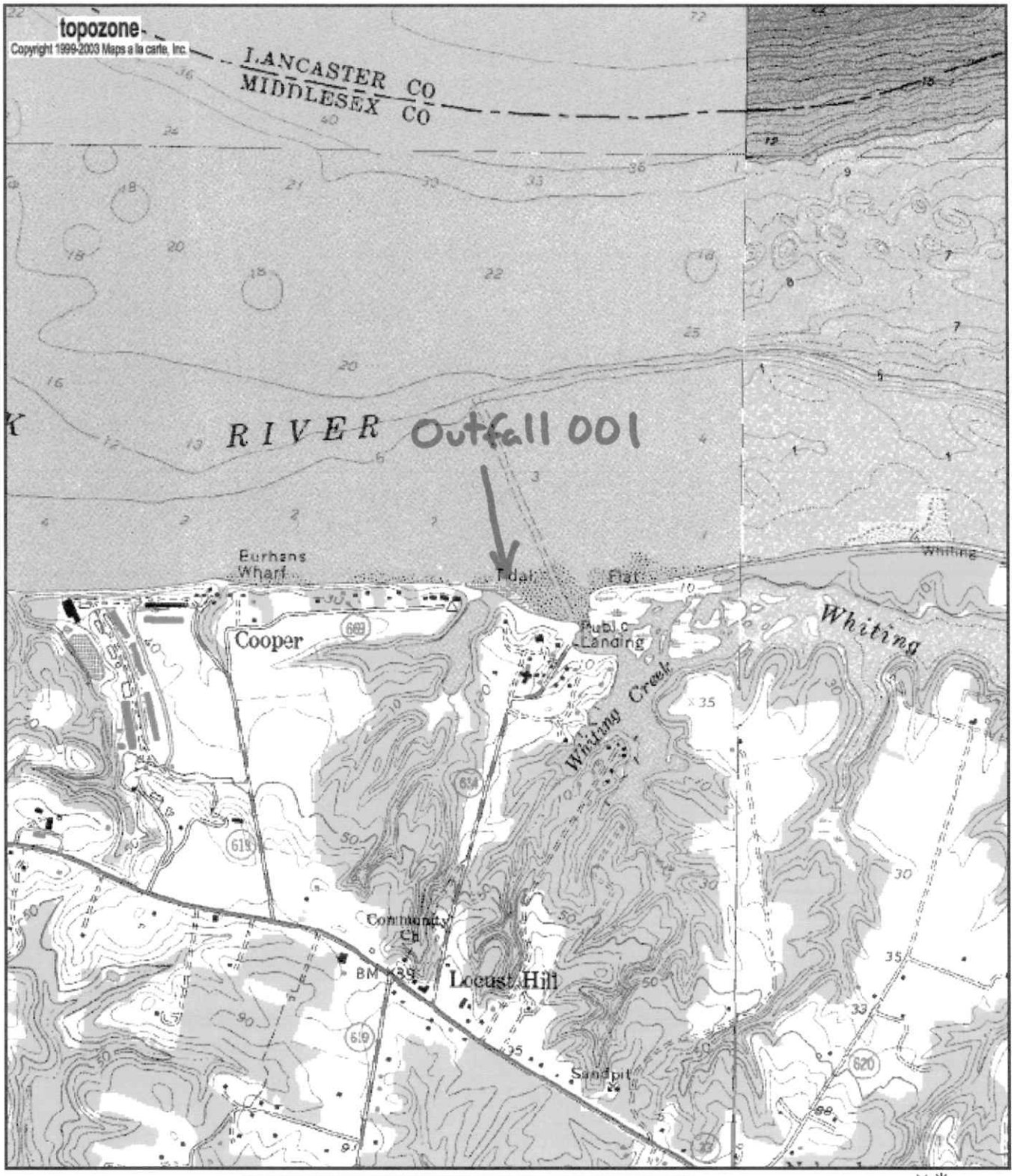
SCHEMATIC FLOW DIAGRAM

NOT TO SCALE

Revised 2-29-08

Attachment B

Location



0 0.3 0.6 0.9 1.2 1.5 km

0 0.2 0.4 0.6 0.8 1 mi

37° 36' 42"N, 76° 30' 31"W (NAD83/WGS84)

Whiting Creek, USGS Saluda (VA) Quadrangle

Projection is UTM Zone 18 NAD83 Datum

M=-10.705
G=-0.921

Attachment C

Ambient Stream Data

MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY
Piedmont Regional Office
4949-A Cox Road Glen Allen, Virginia 23060

SUBJECT: Flow Frequency Determination/305(b) Status Request
Mizpah Nursing Home WWTP – VA0063029

TO: Jeremy Kazio

FROM: Jennifer V. Palmore, P.G.

DATE: March 11, 2008

COPIES: File

The Mizpah Nursing Home's wastewater treatment plant discharges to the Rappahannock River at the mouth of Whiting Creek near Locust Hill, VA. Flow frequencies have been requested at this site for use by the permit writer in developing effluent limitations for the VPDES permit.

The Rappahannock River is tidally influenced at the discharge point. Flow frequencies cannot be determined for tidal waters therefore, standard dilution ratios should be used to evaluate the effluent's impact on the water body.

The portion of the Rappahannock River to which the nursing home discharges is included under a VDH shellfish harvest prohibition due to the presence of the discharger; therefore the Shellfish Use is considered removed.

The mainstem of the Rappahannock River from Myrtle Swamp to its mouth was originally listed in 1998 by DEQ due to dissolved oxygen violations and nutrient overenrichment; the EPA later extended the segment upstream to the confluence with Totuskey Creek. The new Chesapeake Bay Water Quality Standards were implemented during the 2006 cycle, and the mesohaline portion of the Rappahannock failed the Open Water Subuse's summer 30-day dissolved oxygen criteria and the Shallow Water Subuse's submerged aquatic vegetation acreage standards. The TMDL is due by 2010; however tributary strategies have been developed to address the impairment.

In 2004 the mesohaline portion of the mainstem Rappahannock indicated benthic impairment based on the Chesapeake Bay Benthic Index of Biological Integrity. The impairment was attributed to low oxygen and the benthic impairment was treated as a confirmation of the impairment. The mainstem remained impaired in the 2006 cycle, however due to guidance changes the segment was 303(d) listed for estuarine bioassessments.

The Rappahannock River from the I-95 bridge above Fredericksburg to the mouth near Stingray Point is under a 12/13/2004 VDH fish consumption advisory for PCBs in American eel, blue catfish, carp, channel catfish, croaker, gizzard shad, and anadromous (coastal) striped bass. The river is considered impaired of the Fish Consumption Use.

If you have any questions concerning this analysis, please let me know.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

STREAM NAME: Rappahannock River

HYDROLOGIC UNIT: 02080104

TMDL ID: VAN-E20E-03

NEW TMDL ID: 10070

ASSESSMENT CATEGORY: 5A

TMDL DUE DATE: 2018

SEGMENT SIZE: ~123 - Miles

INITIAL LISTING: 2004

UPSTREAM LIMIT:

DESCRIPTION: I-95 bridge

RIVER MILE: 112

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

The Rappahannock River from the I-95 bridge downstream to the mouth near Stingray Point, including its tributaries Hazel Run up the I-95 bridge crossing and Claiborne Run up to the Route 1 bridge crossing.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: PCBs

The segment is under a 12/13/2004 VDH fish consumption advisory for PCBs in American eel, blue catfish, carp, channel catfish, croaker, gizzard shad, anadromous (coastal) striped bass.

IMPAIRMENT SOURCE:

Source of the PCBs is considered unknown.

RECOMMENDATION: Problem Characterization

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

STREAM NAME: Rappahannock River

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E22E-02

NEW TMDL ID: 10126

ASSESSMENT CATEGORY: 5A

TMDL DUE DATE: 2018

SEGMENT SIZE: - Sq. Mi.

INITIAL LISTING: 2006

UPSTREAM LIMIT:

DESCRIPTION: Mesohaline Boundary

RIVER MILE:

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Chesapeake Bay

RIVER MILE: 0.00

The mesohaline mainstem of the Rappahannock River

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Estuarine Bioassessments

In addition, in 2004 the mesohaline portion of the mainstem Rappahannock indicated benthic impairment based on the Chesapeake Bay Benthic Index of Biological Integrity. The impairment was attributed to low oxygen and the benthic impairment was treated as a confirmation of the impairment. The mainstem remains impaired in the 2006 cycle, however due to guidance changes the segment will now be 303(d) listed for estuarine bioassessments.

IMPAIRMENT SOURCE: Unknown

Source is considered unknown, but is believed to be caused by low dissolved oxygen

RECOMMENDATION: Problem Characterization

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

STREAM NAME: Rappahannock River

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E22E-01

NEW TMDL ID: 01776/10071

ASSESSMENT CATEGORY: 5A

TMDL DUE DATE: 2010

SEGMENT SIZE: 126.34 - Sq. Mi.

INITIAL LISTING: 1998

UPSTREAM LIMIT:

DESCRIPTION: Oligohaline/mesohaline boundary

RIVER MILE: ~49.20

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Chesapeake Bay

RIVER MILE: 0.00

The mesohaline Rappahannock River and tidal tributaries.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Open Water Summer - Not Supporting, Deep Water Use - Not Supporting, Shallow Water Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Aquatic Plants (SAV)

The mainstem of the Rappahannock River from Myrtle Swamp to its mouth was originally listed in 1998 by DEQ due to dissolved oxygen violations and nutrient overenrichment. The EPA extended the segment upstream to the confluence with Totuskey Creek . In the 2004 cycle dissolved oxygen violations were noted in deepwater and deep channel stations downstream of the confluence with Lancaster Creek (Morattico), which is further downstream.

The new Chesapeake Bay Water Quality Standards were implemented during the 2006 cycle. The mesohaline portion of the Rappahannock failed both the open water summer dissolved oxygen criteria and the SAV acreage standards during the 2006 cycle. Also, applicable areas failed the deep water applicable dissolved oxygen criteria in 2006.

IMPAIRMENT SOURCE: Point Source, Nonpoint Source

Tributary strategy has been developed.

RECOMMENDATION: Problem Characterization

Ambient Stream Data - Station ID 3-RRP010.60
Rappahannock River, Middlesex County

Collection Date	Depth Desc	Depth	Temp Celcius	Field pH	Do Probe	Salinity	DO Winkler
7/11/1984	M	13.00	24.00			2.20	
7/11/1984	M	11.00	24.00			2.20	
7/11/1984	M	9.00	23.90			2.60	
7/11/1984	M	7.00	24.00			3.40	
7/11/1984	B	20.99	24.40			1.00	
7/11/1984	S	3.00	24.00			6.20	
7/11/1984	M	15.00				1.60	
7/11/1984	M	17.00				1.30	
7/11/1984	M	19.00				1.20	
7/11/1984	M	5.00	24.00			3.40	
7/11/1984	S	1.00	24.40			6.20	
8/9/1984	S	3.00	28.62			7.10	
8/9/1984	M	5.00	28.47			6.80	
8/9/1984	M	7.00	27.80			3.80	
8/9/1984	M	9.00	27.34			2.70	
8/9/1984	M	11.00	26.86			1.40	
8/9/1984	M	13.00	26.47			1.10	
8/9/1984	M	15.00	26.36			.30	
8/9/1984	M	17.00	26.07			.20	
8/9/1984	M	19.00	25.95			.20	
8/9/1984	B	20.99	25.85			.20	
8/9/1984	S	1.00	28.83			8.20	
8/23/1984	M	10.00	26.92		15.16	.40	
8/23/1984	M	8.00	27.25		13.42	.40	
8/23/1984	M	6.00	27.36		12.18	1.20	
8/23/1984	M	4.00	26.97		10.56	2.00	
8/23/1984	M	2.00	26.76		9.82	6.10	
8/23/1984	S	1.00	26.69	8.10	9.84	9.10	7.63
8/23/1984	M	12.00	26.66		16.02	.40	
8/23/1984	B	14.00	26.36		17.20	.30	.88
9/10/1984	M	3.00	24.47			5.95	
9/10/1984	S	1.00	24.47	8.10		6.00	
9/10/1984	M	5.00	24.56			5.65	
9/10/1984	M	7.00	24.79			4.95	
9/10/1984	M	9.00	24.83			4.40	
9/10/1984	B	20.99	25.43	8.10		.70	
9/10/1984	M	13.00	24.81			4.20	
9/10/1984	M	15.00	24.91			3.45	
9/10/1984	M	17.00	25.09			2.70	
9/10/1984	M	19.00	25.41			.80	
9/10/1984	M	11.00	24.80			4.40	
9/27/1984	M	3.00	21.50		15.70	6.40	
9/27/1984	S	1.00	21.80	7.80	15.70	6.40	6.93
9/27/1984	M	5.00	21.60		15.70	6.50	
9/27/1984	B	8.00	20.70		15.10	5.00	6.71
9/27/1984	M	7.00	21.60		15.80	4.90	

Collection Date	Depth Desc	Depth	Temp Celcius	Field pH	Do Probe	Salinity	DO Winkler
10/9/1984	S	1.00	18.69	7.60		9.70	6.10
10/9/1984	M	3.00	18.67			9.60	
10/9/1984	M	5.00	18.73			9.45	
10/9/1984	M	7.00	18.67			8.80	
10/9/1984	M	9.00	18.56			8.50	
10/9/1984	B	20.99	18.79			5.05	4.90
10/9/1984	M	13.00	18.71			6.65	
10/9/1984	M	15.00	18.75			6.05	
10/9/1984	M	19.00	18.78			5.75	
10/9/1984	M	17.00	18.76			5.90	
10/9/1984	M	11.00	18.69			7.05	
10/31/1984	S	3.00	20.50		16.50	7.50	
10/31/1984	M	5.00	20.40		16.80	6.20	
10/31/1984	M	7.00	20.40		17.80	7.40	
10/31/1984	M	9.00	19.80		18.48	7.30	
10/31/1984	M	11.00	19.74		19.18	7.50	
10/31/1984	M	13.00	19.71		18.89	7.70	
10/31/1984	B	15.00	19.68		19.79	7.80	6.15
10/31/1984	S	1.00	20.60	7.90	16.46	8.00	8.65
11/9/1984	B	13.00	15.00	7.10	18.10	8.90	7.74
11/9/1984	M	11.00	15.30		17.90	9.00	
11/9/1984	M	9.00	16.00		17.60	9.10	
11/9/1984	M	7.00	16.00		17.40	9.00	
11/9/1984	M	5.00	16.00		17.50	8.80	
11/9/1984	S	3.00	15.70		17.50	7.60	
11/9/1984	S	1.00	15.80	5.40	17.00	7.70	8.24
12/10/1984	M	17.00	7.03		19.60	10.30	
12/10/1984	M	15.00	7.03		19.48	10.40	
12/10/1984	M	13.00	7.07		19.28	10.40	
12/10/1984	M	11.00	7.00		19.36	10.50	
12/10/1984	M	9.00	6.97		19.03	10.50	
12/10/1984	M	7.00	6.96		18.29	10.70	
12/10/1984	M	5.00	6.91		17.55	11.00	
12/10/1984	M	3.00	6.82		17.32	11.30	
12/10/1984	B	19.00	7.07	7.30	19.66	10.20	10.10
12/10/1984	S	1.00	6.81	7.60	17.21	11.40	11.55
2/7/1985	S	1.00	.80	8.00		15.30	14.00
2/7/1985	M	3.00	.90			15.20	
2/7/1985	B	9.00	.90	7.30		15.20	13.70
2/7/1985	M	7.00	.90			15.20	
2/7/1985	M	5.00	.90			15.30	
3/7/1985	S	1.00	6.56	7.60	15.58	11.20	11.10
3/7/1985	M	3.00	6.68		15.70	11.30	
3/7/1985	M	5.00	6.69		15.96	11.40	
3/7/1985	M	7.00	6.41		16.30	11.40	
3/7/1985	M	9.00	5.06		16.98	11.40	
3/7/1985	M	11.00	4.94		17.02	11.40	
3/7/1985	B	13.00	5.29	7.60	17.06	11.40	11.30
3/20/1985	S	1.00	7.50	8.70	15.90	11.60	12.60
3/20/1985	M	3.00	7.50		15.80	11.60	
3/20/1985	M	5.00	7.50		15.90	11.50	

Collection Date	Depth Desc	Depth	Temp Celcius	Field pH	Do Probe	Salinity	DO Winkler
3/20/1985	M	7.00	7.40		15.90	11.40	
3/20/1985	B	9.00	7.40	8.50	16.10	11.10	9.00
4/8/1985	B	9.00	11.76	8.80	16.87	9.88	10.20
4/8/1985	M	7.00	11.68		16.94	9.80	
4/8/1985	M	5.00	11.62		16.33	10.00	
4/8/1985	M	3.00	11.59		16.25	10.00	
4/8/1985	S	1.00	11.69	8.30	16.28	10.10	10.10
2648 lines of data were omitted for presentation purposes							
12/11/2006	M	5.00	8.00	8.00	13.20	10.40	
12/11/2006	M	7.00	8.50	7.90	14.20	9.50	
12/11/2006	M	9.00	8.50	7.90	14.60	9.80	
12/11/2006	B	3.50					
1/18/2007	M	5.00	8.90	8.10	13.00	10.10	
1/18/2007	M	7.00	9.10	8.10	13.60	9.80	
1/18/2007	M	9.00	9.20	8.00	14.50	9.50	
1/18/2007	S	1.00	8.30	8.10	11.40	10.40	
1/18/2007	B	1.00					
1/18/2007	M	3.00	8.70	8.10	12.60	10.20	
1/18/2007	S	.10					
1/18/2007	M	.50					
1/18/2007	B	10.00	9.20	8.00	14.70	9.50	
2/26/2007	S	.10					
2/26/2007	M	.50					
2/26/2007	M	1.00					
2/26/2007	M	1.50					
2/26/2007	M	2.00					
2/26/2007	S	1.00	3.20	7.80	13.00	12.20	
2/26/2007	M	5.00	3.20	7.80	13.10	12.10	
2/26/2007	B	10.00	3.10	7.80	14.20	12.10	
2/26/2007	M	3.00	3.20	7.80	13.00	12.20	
2/26/2007	M	7.00	3.20	7.80	13.70	12.00	
2/26/2007	M	9.00	3.10	7.80	14.20	12.10	
2/26/2007	B	2.50					
4/25/2007	M	6.00	11.60	7.80	11.20	8.30	
4/25/2007	M	2.00	15.20	8.60	9.90	11.20	
4/25/2007	M	3.00	14.40	8.60	10.00	10.80	
4/25/2007	B	10.00	11.20	7.80	11.60	9.00	
4/25/2007	S	1.00	15.30	8.70	9.90	11.50	
4/25/2007	M	4.00	13.90	8.50	10.10	9.60	
4/25/2007	M	8.00	11.30	7.80	11.50	8.50	
4/25/2007	M	7.00	11.50	7.80	11.20	8.30	
4/25/2007	M	9.00	11.20	7.80	11.60	8.70	
4/25/2007	M	5.00	12.20	8.00	10.90	8.40	
5/9/2007	M	2.00	16.00	8.10	9.50	7.60	
5/9/2007	M	3.00	16.10	8.10	9.60	7.40	
5/9/2007	M	4.00	16.00	8.10	9.70	7.40	
5/9/2007	M	6.00	15.90	8.00	10.30	7.00	
5/9/2007	M	5.00	16.00	8.00	10.10	7.20	
5/9/2007	M	7.00	16.00	8.00	10.50	7.00	
5/9/2007	M	8.00	15.90	8.00	10.60	6.60	

Collection Date	Depth Desc	Depth	Temp Celcius	Field pH	Do Probe	Salinity	DO Winkler
5/9/2007	B	9.00	15.80	7.90	10.90	6.60	
5/9/2007	S	1.00	16.00	8.10	9.20	7.60	
6/6/2007	M	5.00	22.70	7.90	12.90	6.70	
6/6/2007	M	2.00	22.80	7.90	12.60	7.00	
6/6/2007	M	4.00	22.80	7.90	12.70	6.80	
6/6/2007	S	1.00	22.80	7.90	12.50	7.00	
6/6/2007	M	6.00	22.70	7.90	13.00	6.30	
6/6/2007	M	3.00	22.80	8.00	12.60	7.00	
6/6/2007	M	7.00	22.50	7.80	14.00	5.30	
6/6/2007	M	8.00	21.20	7.70	15.70	5.00	
6/6/2007	M	9.00	20.90	7.70	16.00	4.90	
6/6/2007	B	10.00	20.80	7.70	16.40	5.20	
7/11/2007	M	6.00	25.80	7.50	16.90	2.70	
7/11/2007	M	8.00	25.20	7.40	17.60	2.60	
7/11/2007	M	3.00	27.90	8.10	15.20	6.50	
7/11/2007	M	5.00	26.10	7.50	16.10	2.90	
7/11/2007	M	9.00	25.20	7.40	17.60	2.70	
7/11/2007	M	4.00	27.90	8.10	15.20	5.90	
7/11/2007	M	7.00	25.30	7.40	17.50	2.60	
7/11/2007	M	2.00	27.90	8.10	15.20	6.70	
7/11/2007	S	1.00	27.90	8.10	15.20	6.80	
7/11/2007	B	10.00	25.20	7.40	17.70	3.50	
8/9/2007	M	3.00	29.70	8.10	16.70	6.60	
8/9/2007	S	1.00	29.70	8.10	16.70	6.70	
8/9/2007	M	9.00	27.00	7.50	19.70	1.90	
8/9/2007	M	5.00	28.70	7.80	17.80	4.30	
8/9/2007	M	7.00	27.40	7.60	19.20	2.60	
8/9/2007	B	10.00	27.00	7.50	19.70	1.90	
8/9/2007	M	2.00	29.70	8.10	16.70	6.70	
8/9/2007	M	8.00	27.30	7.60	19.30	2.30	
8/9/2007	M	4.00	29.60	8.00	17.00	5.80	
8/9/2007	M	6.00	28.50	7.80	18.00	3.70	
9/12/2007	M	6.00	27.00	7.70	18.30	4.80	
9/12/2007	M	2.00	27.00	7.70	18.20	5.10	
9/12/2007	M	3.00	27.00	7.70	18.20	5.10	
9/12/2007	M	5.00	27.00	7.70	18.20	4.90	
9/12/2007	B	10.00	26.90	7.60	20.20	3.00	
9/12/2007	M	8.00	27.00	7.50	19.40	2.90	
9/12/2007	M	9.00	26.90	7.60	20.00	3.20	
9/12/2007	M	7.00	27.00	7.70	18.30	4.10	
9/12/2007	M	4.00	27.00	7.70	18.20	5.00	
9/12/2007	S	1.00	27.00	7.70	18.20	5.10	
10/10/2007	M	8.00	24.10	7.50	20.00	4.10	
10/10/2007	M	4.00	24.90	7.80	19.00	6.70	
10/10/2007	M	5.00	24.90	7.80	19.00	6.00	
10/10/2007	M	6.00	24.50	7.60	19.40	4.70	
10/10/2007	M	2.00	24.90	7.90	18.90	7.00	
10/10/2007	B	9.00	24.10	7.50	20.00	4.10	
10/10/2007	M	3.00	24.90	7.90	18.90	6.70	
10/10/2007	M	7.00	24.20	7.50	19.90	4.10	
10/10/2007	S	1.00	24.90	7.90	18.90	7.00	

Collection Date	Depth Desc	Depth	Temp Celcius	Field pH	Do Probe	Salinity	DO Winkler
12/11/2007	B	9.00	8.40	7.70	20.00	9.30	
12/11/2007	M	3.00	8.70	7.80	19.00	9.60	
12/11/2007	S	1.00	8.90	7.80	18.70	10.20	
12/11/2007	M	8.00	8.40	7.70	19.90	9.30	
12/11/2007	M	2.00	8.80	7.80	18.70	9.90	
12/11/2007	M	6.00	8.50	7.80	19.80	9.30	
12/11/2007	M	4.00	8.50	7.80	19.50	9.40	
12/11/2007	M	5.00	8.50	7.80	19.70	9.30	
12/11/2007	M	7.00	8.40	7.80	19.80	9.30	
1/22/2008	B	9.00	5.40	7.70	18.40	11.10	
1/22/2008	M	4.00	5.00	7.70	18.10	11.00	
1/22/2008	M	6.00	5.10	7.70	18.20	10.90	
1/22/2008	M	2.00	4.70	7.70	18.00	11.00	
1/22/2008	M	8.00	5.40	7.70	18.40	10.90	
1/22/2008	S	1.00	4.70	7.70	18.00	11.00	
1/22/2008	M	5.00	5.10	7.70	18.20	11.00	
1/22/2008	M	7.00	5.10	7.70	18.20	10.90	
1/22/2008	M	3.00	4.80	7.70	18.00	11.10	
2/12/2008	M	4.00	6.90	7.80	17.60	10.70	
2/12/2008	M	5.00	6.90	7.80	17.60	10.70	
2/12/2008	M	3.00	6.80	7.80	17.60	10.70	
2/12/2008	M	7.00	7.00	7.80	17.80	10.80	
2/12/2008	M	6.00	6.90	7.80	17.70	10.80	
2/12/2008	M	2.00	6.90	7.80	17.60	10.70	
2/12/2008	B	8.00	7.00	7.80	17.80	10.90	
2/12/2008	S	1.00	6.90	7.80	17.60	10.70	
3/11/2008	M	7.00	8.60	7.80	16.50	10.30	
3/11/2008	M	2.00	8.50	7.80	16.50	10.30	
3/11/2008	M	3.00	8.60	7.80	16.50	10.30	
3/11/2008	M	4.00	8.60	7.80	16.50	10.30	
3/11/2008	M	6.00	8.60	7.80	16.50	10.30	
3/11/2008	S	1.00	8.50	7.80	16.50	10.30	
3/11/2008	M	8.00	8.60	7.80	16.50	10.30	
3/11/2008	B	9.00	8.60	7.80	16.50	10.40	
3/11/2008	M	5.00	8.50	7.70	16.50	10.30	
90%tile			**27.0**	**8.1**			
10%tile			**5.4**	**7.5**			
MEAN					**16.1**	**7.71**	

Attachment D

Site Inspection Report

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

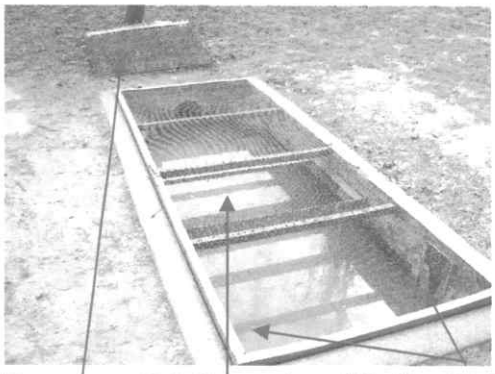
Piedmont Regional Office

WASTEWATER FACILITY INSPECTION REPORT

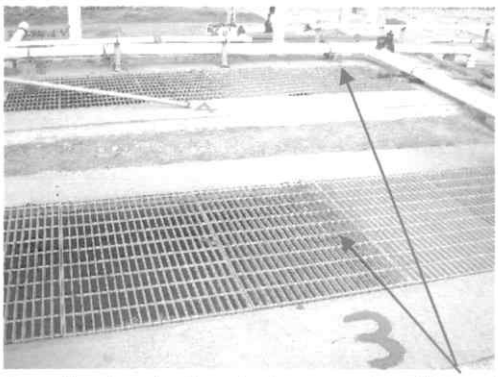
FACILITY NAME:	Mitzpah Nursing Home	**INSPECTOR:**	Heather A. Horne
PERMIT No.:	VA0063029	**INSPECTION DATE:**	February 20, 2008 (1026-1209 hrs)
TYPE OF FACILITY:	Municipal Minor/Small	**REPORT COMPLETED:**	March 5, 2008
COUNTY/CITY:	Middlesex County	**UNANNOUNCED INSPECTION:**	NO
REVIEWED BY:			
PRESENT DURING INSPECTION:	J.D. Davis (operator); Meredith Williams, DEQ		

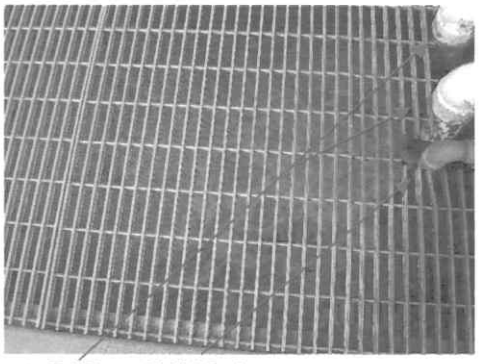
I. OPERATIONAL UNIT REVIEW AND CONDITION:

The nursing home is served by a package sewage treatment plant. Mr. Davis has been the long time operator and the plant is well operated and maintained. Mr. Davis has an assistant that does some functions around the plant (e.g. cleans grit channel daily)



Barscreen, Grit Channel, and Splitter Weirs: Barscreen removed and stored adjacent to unit as debris is satisfactorily removed daily from grit channel. Removed debris is placed in an adjacent trash can with lid for vector control. Weirs split flow to the dual train package plant.

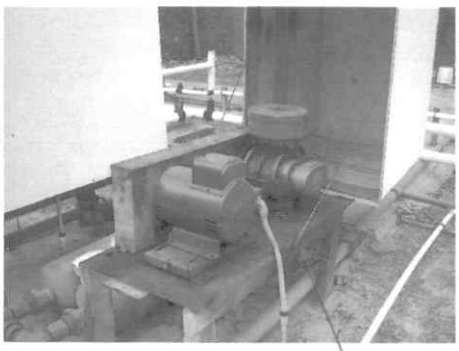




Aeration basin (two trains - each with two basins in series), Settlometer test, RAS and WAS decant:

Good settleability (tests done for each basin in each train), mixed liquor was a slightly darker brown in color in the second train with a tan slightly stiff foam, indicating an older sludge age than the first train; no unusual odors. Mr. Davis indicated sludge had been more recently wasted from the first train and he will slowly begin wasting from the second train, so as not to upset the plant. RAS and WAS decant returned to the first basin of each train. The current aeration schedule is 30 minutes on and 30 off. Mixing appeared adequate.

I. OPERATIONAL UNIT REVIEW AND CONDITION CONTINUED:


Two blowers, and Sludge Holding Tank:

The two blowers - automatically alternate use between cycles. New motors were installed in the blowers since the last inspection. Sludge is wasted from each basin in each train as needed. Sludge holding tank last pumped in early February 2008 by Brownley Septage Service.

Clarifier: One for each train. Good settling, clear effluent; double hopper sludge collection in each unit.

Liquid chlorine - chemical building:

The facility switched from gaseous to liquid chlorine since the last inspection. The chlorine is mixed weekly. The current blend utilized is 7 gallons of bleach to 30 gallons of water. Based on average flow the peristaltic chlorine dosing pump was set to 25 strokes/minute.

Chlorine Contact Tank – The CCT appeared to be in good condition, precedes 45° V-Notch Weir. A TRC sample was taken by Mr. Davis at time of inspection.

Flow Measurement: 45° V-Notch Weir with Strip Chart Recorder ("times 8") and Totalizer ("times 20" multiplier).

I. OPERATIONAL UNIT REVIEW AND CONDITION CONTINUED:

Dechlorination – A two tablet dechlorination feeder has been installed since the previous inspection. The feeder is checked once per week and tablets are replaced as needed. The facility is using sodium sulfite "D-Chlor" tablets.

Sample Collection – A new sampling portal has been installed since the previous inspection.

Outfall – The outfall reportedly has a diffuser approximately 250 feet from shore in the Rappahannock River. A marker pole previously indicating the location of the outfall pipe was destroyed by Hurricane Floyd.

II. ULTIMATE DISPOSAL OF SOLIDS:

Pumped and hauled by Septage Hauler- Brownley Septage Service.

III. FIELD DATA:

Flow:	0.04 MGD (2/20/08 @ 1105 am- totalizer)	**Dissolved Oxygen:**	N/A mg/L	**Contact Chlorine Res.:**	0.53 mg/L
pH:	7.87 S.U.	**Final Chlorine Res.:**	0.00 mg/L	**Temperature:**	Not ascertained °C

Calibration Time/Initials/documentation: 2/20/08/1045 am/JD Davis/Yes

Condition of Effluent: Appeared clear

Condition of Receiving Stream: Diffuser in Rappahannock River (not ascertained)

Samples Collected during the inspection: No

30 Min. Settleability Results: Basin 1: 650; Basin 2: 660; Basin 3: 670; Basin 4: 900

IV. PLANT OPERATIONS AND MAINTENANCE:

Operations and Maintenance Manual: O&M Manual exists but was not evaluated during inspection. The facility is reportedly in the process of updating the O&M.

Class and Number of Licensed Operators: One Class III; former operator (license expired) acts as assistant

Alarm Systems and Alternate Power: N/A

Any bypassing since last inspection? No

When was the RPZ device last checked? June 2006.

Name, number and description of pump stations: None

V. COMMENTS:

Items evaluated during this inspection include (check all that apply):

[x] Yes	[ ] No		Operational Units
[ ] Yes	[x] No		O & M Manual
[ ] Yes	[x] No		Maintenance Records
[ ] Yes	[ ] No	[x] N/A	Pathogen Reduction & Vector Attraction Reduction
[ ] Yes	[x] No	[ ] N/A	Sludge Disposal Plan
[ ] Yes	[ ] No	[x] N/A	Groundwater Monitoring Plan
[ ] Yes	[ ] No	[x] N/A	Storm Water Pollution Prevention Plan
[x] Yes	[ ] No	[ ] N/A	Permit Special Conditions
[ ] Yes	[ ] No	[x] N/A	Permit Water Quality Chemical Monitoring
[x] Yes	[ ] No	[ ] N/A	Laboratory Records (see Lab Report)

VI. GENERAL COMMENTS/RECOMMENDATIONS:

1. Leftover patient medications are no longer disposed of in the sludge storage tank. Medications are now collected by drug companies.

VII. COMPLIANCE RECOMMENDATIONS/REQUEST FOR CORRECTIVE ACTION:

1. The RPZ or potable water backflow preventor should be tested at least annually per VDH requirements. ***[Mr. Davis indicated onsite that the test had already been scheduled for June 2008. No written response required.]***

Attachment E

Effluent Limitations Evaluations

Mizpah Nursing Home STP - VA00663029
DMR data for pH

	Monthly Average Concentration	
DMR Due Date	Minimum pH (SU)	Maximum pH (SU)
10/10/2003	7	7.8
11/10/2003	7.2	7.8
12/10/2003	7.1	7.8
1/10/2004	7.2	7.8
2/10/2004	7.1	7.7
3/10/2004	7.4	7.8
4/10/2004	7.1	7.4
5/10/2004	7.1	7.8
6/10/2004	7.1	7.6
7/10/2004	7.1	7.8
8/10/2004	7.1	7.6
9/10/2004	7.1	7.9
10/10/2004	7.4	8.3
11/10/2004	7.2	8.1
12/10/2004	7.6	8.1
1/10/2005	7.6	8.1
2/10/2005	7.7	8.1
3/10/2005	7.78	8.13
4/10/2005	7.89	8.33
5/10/2005	8.02	8.38
6/10/2005	7.83	8.21
7/10/2005	7.77	8.17
8/10/2005	7.78	8.13
9/10/2005	7.75	8.24
10/10/2005	7.5	8.23
11/10/2005	7.9	8.18
12/10/2005	8.01	8.36
1/10/2006	7.31	8.38
2/10/2006	7.78	8.3
3/10/2006	7.92	8.21
4/10/2006	7.98	8.16
5/10/2006	7.92	8.25
6/10/2006	7.99	8.33
7/10/2006	7.9	8.21
8/10/2006	7.96	8.28
9/10/2006	7	8.27
10/10/2006	7.98	8.21
11/10/2006	7.17	8.18
12/10/2006	7.74	8.3
1/10/2007	7.79	8.24
2/10/2007	7.94	8.24
3/10/2007	8.01	8.28
4/10/2007	7.98	8.3
5/10/2007	8.01	8.28
6/10/2007	7.79	8.26
7/10/2007	8.01	8.17
8/10/2007	7.78	8.19
9/10/2007	7.79	8.2
10/10/2007	7.81	8.37
11/10/2007	7.3	8.1
12/10/2007	7.3	8.01
1/10/2008	7.59	8.03
90%Tile		8.327
10%tile		7.8

MSTRANTI DATA SOURCE REPORT

Stream Information	
Mean Hardness	Does not apply
90% Temperature (annual)	Ambient Stream Data - STORET
90% Temperature (wet season)	Ambient Stream Data - STORET
90% Maximum pH	Ambient Stream Data - STORET
10% Maximum pH	Ambient Stream Data - STORET
Mean Salinity	Ambient Stream Data - STORET
Tier Designation	Advised by PRO's Water Modeler
Stream Flows	
All Data	Flow Frequency Analysis
Mixing Information	
All Data	Tidal defaults used
Effluent Information	
Mean Hardness	A minimum hardness of 25 mg/L was used for this evaluation based on a conservative assumption.
90% Temperature (annual)	Provided by the permittee in the 2008 application for reissuance.
90% Maximum pH	Calculated from DMR data provided by the permittee between October 2003 – January 2008
10% Maximum pH	
Discharge Flow	STP Design Flow

Data Location:

STORET Data – Attachment C
Flow Frequency Analysis- Attachment C

SALTWATER AND TRANSITION ZONES
WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Facility Name: Mizpah Nursing Home STP Permit No.: VA0063029 Version: OWP Guidance Memo 00-2011 (8/24/00)
Receiving Stream: Rappahannock River

Stream Information

Mean Hardness (as CaCO3) =		mg/l
90th % Temperature (Annual) =	27	(° C)
90th % Temperature (Winter) =		(° C)
90th % Maximum pH =	8.1	
10th % Maximum pH =	7.5	
Tier Designation (1 or 2) =	1	
Early Life Stages Present Y/N =		
Tidal Zone =	1	(1 = saltwater, 2 = transition zone)
Mean Salinity =	7.71	(g/kg)

Mixing Information

Design Flow (MGD)	0.02
Acute WLA multiplier	2
Chronic WLA multiplier	51
Human health WLA multiplier	51

Effluent Information

Mean Hardness (as CaCO3) =	25	mg/L
90 % Temperature (Annual) =	25	(° C)
90 % Temperature (Winter) =		(° C)
90 % Maximum pH =	8.3	SU
10 % Maximum pH =	7.8	SU
Discharge Flow =	0.02	MGD

Parameter	Background	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			**Most Limiting Allocations**		
(ug/l unless noted)	Conc.	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	**Acute**	**Chronic**	**HH**
Acenapthene	0	--	--	2.7E+03	--	--	1.4E+05	--	--	--	--	--	--	--	--	**1.4E+05**
Acrolein		--	--	7.8E+02	--	--	4.0E+04	--	--	--	--	--	--	--	--	**4.0E+04**
Acrylonitrile[C]		--	--	6.6E+00	--	--	3.4E+02	--	--	--	--	--	--	--	--	**3.4E+02**
Aldrin [C]	0	1.3E+00	--	1.4E-03	2.6E+00	--	7.1E-02	--	--	--	--	--	--	**2.6E+00**	--	**7.1E-02**
Ammonia-N (mg/l) - Annual	0	2.3E+00	3.9E-01	--	4.5E+00	2.0E+01	--	--	--	--	--	--	--	**4.5E+00**	**2.0E+01**	--
Ammonia-N (mg/l) - Winter	0	1.5E+01	2.7E+00	--	2.9E+01	1.4E+02	--	--	--	--	--	--	--	**2.9E+01**	**1.4E+02**	--
Anthracene	0	--	--	1.1E+05	--	--	5.6E+06	--	--	--	--	--	--	--	--	**5.6E+06**
Antimony	0	--	--	4.3E+03	--	--	2.2E+05	--	--	--	--	--	--	--	--	**2.2E+05**
Arsenic	0	6.9E+01	3.6E+01	--	1.4E+02	1.8E+03	--	--	--	--	--	--	--	**1.4E+02**	**1.8E+03**	--
Benzene [C]	0	--	--	7.1E+02	--	--	3.6E+04	--	--	--	--	--	--	--	--	**3.6E+04**
Benzidine[C]		--	--	5.4E-03	--	--	2.8E-01	--	--	--	--	--	--	--	--	**2.8E-01**
Benzo (a) anthracene [C]	0	--	--	4.9E-01	--	--	2.5E+01	--	--	--	--	--	--	--	--	**2.5E+01**
Benzo (b) fluoranthene [C]	0	--	--	4.9E-01	--	--	2.5E+01	--	--	--	--	--	--	--	--	**2.5E+01**
Benzo (k) fluoranthene [C]	0	--	--	4.9E-01	--	--	2.5E+01	--	--	--	--	--	--	--	--	**2.5E+01**
Benzo (a) pyrene [C]	0	--	--	4.9E-01	--	--	2.5E+01	--	--	--	--	--	--	--	--	**2.5E+01**
Bis2-Chloroethyl Ether		--	--	1.4E+01	--	--	7.1E+02	--	--	--	--	--	--	--	--	**7.1E+02**
Bis2-Chloroisopropyl Ether		--	--	1.7E+05	--	--	8.7E+06	--	--	--	--	--	--	--	--	**8.7E+06**
Bromoform [C]	0	--	--	3.6E+03	--	--	1.8E+05	--	--	--	--	--	--	--	--	**1.8E+05**
Butylbenzylphthalate	0	--	--	5.2E+03	--	--	2.7E+05	--	--	--	--	--	--	--	--	**2.7E+05**
Cadmium	0	4.0E+01	8.8E+00	--	8.0E+01	4.5E+02	--	--	--	--	--	--	--	**8.0E+01**	**4.5E+02**	--
Carbon Tetrachloride [C]	0	--	--	4.4E+01	--	--	2.2E+03	--	--	--	--	--	--	--	--	**2.2E+03**
Chlordane [C]	0	9.0E-02	4.0E-03	2.2E-02	1.8E-01	2.0E-01	1.1E+00	--	--	--	--	--	--	**1.8E-01**	**2.0E-01**	**1.1E+00**
TRC	0			--			--	--	--	--	--	--	--	--	--	--
Chlorine Prod. Oxidant	0	1.3E+01	7.5E+00	--	2.6E+01	3.8E+02	--	--	--	--	--	--	--	**2.6E+01**	**3.8E+02**	--

Parameter	Background	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
(ug/l unless noted)	Conc.	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH
Chlorobenzene		--	--	2.1E+04	--	--	1.1E+06	--	--	--	--	--	--	--	--	1.1E+06
Chlorodibromomethane[C]	0	--	--	3.4E+02	--	--	1.7E+04	--	--	--	--	--	--	--	--	1.7E+04
Chloroform [C]	0	--	--	2.9E+04	--	--	1.5E+06	--	--	--	--	--	--	--	--	1.5E+06
2-Chloronaphthalene	0	--	--	4.3E+03	--	--	2.2E+05	--	--	--	--	--	--	--	--	2.2E+05
2-Chlorophenol	0	--	--	4.0E+02	--	--	2.0E+04	--	--	--	--	--	--	--	--	2.0E+04
Chlorpyrifos	0	1.1E-02	5.6E-03	--	2.2E-02	2.9E-01	--	--	--	--	--	--	--	2.2E-02	2.9E-01	--
Chromium III	0			--			--	--	--	--	--	--	--	--	--	--
Chromium VI	0	1.1E+03	5.0E+01	--	2.2E+03	2.6E+03	--	--	--	--	--	--	--	2.2E+03	2.6E+03	--
Chrysene [C]	0	--	--	4.9E-01	--	--	2.5E+01	--	--	--	--	--	--	--	--	2.5E+01
Copper	0	9.3E+00	6.0E+00	--	1.9E+01	3.1E+02	--	--	--	--	--	--	--	1.9E+01	3.1E+02	--
Cyanide	0	1.0E+00	1.0E+00	2.2E+05	2.0E+00	5.1E+01	1.1E+07	--	--	--	--	--	--	2.0E+00	5.1E+01	1.1E+07
DDD [C]	0	--	--	8.4E-03	--	--	4.3E-01	--	--	--	--	--	--	--	--	4.3E-01
DDE [C]	0	--	--	5.9E-03	--	--	3.0E-01	--	--	--	--	--	--	--	--	3.0E-01
DDT [C]	0	1.3E-01	1.0E-03	5.9E-03	2.6E-01	5.1E-02	3.0E-01	--	--	--	--	--	--	2.6E-01	5.1E-02	3.0E-01
Demeton	0	--	1.0E-01	--	--	5.1E+00	--	--	--	--	--	--	--	--	5.1E+00	--
Dibenz(a,h)anthracene [C]	0	--	--	4.9E-01	--	--	2.5E+01	--	--	--	--	--	--	--	--	2.5E+01
Dibutyl phthalate	0	--	--	1.2E+04	--	--	6.1E+05	--	--	--	--	--	--	--	--	6.1E+05
Dichloromethane (Methylene Chloride)[C]	0	--	--	1.6E+04	--	--	8.2E+05	--	--	--	--	--	--	--	--	8.2E+05
1,2-Dichlorobenzene	0	--	--	1.7E+04	--	--	8.7E+05	--	--	--	--	--	--	--	--	8.7E+05
1,3-Dichlorobenzene	0	--	--	2.6E+03	--	--	1.3E+05	--	--	--	--	--	--	--	--	1.3E+05
1,4-Dichlorobenzene	0	--	--	2.6E+03	--	--	1.3E+05	--	--	--	--	--	--	--	--	1.3E+05
3,3-Dichlorobenzidine[C]	0	--	--	7.7E-01	--	--	3.9E+01	--	--	--	--	--	--			
Dichlorobromomethane [C]	0	--	--	4.6E+02	--	--	2.3E+04	--	--	--	--	--	--	--	--	2.3E+04
1,2-Dichloroethane [C]	0	--	--	9.9E+02	--	--	5.0E+04	--	--	--	--	--	--	--	--	5.0E+04
1,1-Dichloroethylene	0	--	--	1.7E+04	--	--	8.7E+05	--	--	--	--	--	--	--	--	8.7E+05
1,2-trans-dichloroethylene	0	--	--	1.4E+05	--	--	7.1E+06	--	--	--	--	--	--	--	--	7.1E+06
2,4-Dichlorophenol	0	--	--	7.9E+02	--	--	4.0E+04	--	--	--	--	--	--	--	--	4.0E+04
1,2-Dichloropropane[C]	0	--	--	3.9E+02	--	--	2.0E+04	--	--	--	--	--	--	--	--	2.0E+04
1,3-Dichloropropene	0	--	--	1.7E+03	--	--	8.7E+04	--	--	--	--	--	--	--	--	8.7E+04
Dieldrin [C]	0	7.1E-01	1.9E-03	1.4E-03	1.4E+00	9.7E-02	7.1E-02	--	--	--	--	--	--	1.4E+00	9.7E-02	7.1E-02
Diethyl Phthalate	0	--	--	1.2E+05	--	--	6.1E+06	--	--	--	--	--	--	--	--	6.1E+06
Di-2-Ethylhexyl Phthalate [C]	0	--	--	5.9E+01	--	--	3.0E+03	--	--	--	--	--	--	--	--	3.0E+03
2,4-Dimethylphenol	0	--	--	2.3E+03	--	--	1.2E+05	--	--	--	--	--	--	--	--	1.2E+05
Dimethyl Phthalate	0	--	--	2.9E+06	--	--	1.5E+08	--	--	--	--	--	--	--	--	1.5E+08
Di-n-Butyl Phthalate	0	--	--	1.2E+04	--	--	6.1E+05	--	--	--	--	--	--	--	--	6.1E+05
2,4 Dinitrophenol	0	--	--	1.4E+04	--	--	7.1E+05	--	--	--	--	--	--	--	--	7.1E+05
2-Methyl-4,6-Dinitrophenol	0	--	--	7.65E+02	--	--	3.9E+04	--	--	--	--	--	--	--	--	3.9E+04
2,4-Dinitrotoluene [C]	0	--	--	9.1E+01	--	--	4.6E+03	--	--	--	--	--	--	--	--	4.6E+03
Dioxin (2,3,7,8-tetrachlorodibenzo-p-dioxin) (ppq)	0	--	--	1.2E-06	--	--	6.1E-05	--	--	--	--	--	--	--	--	6.1E-05
1,2-Diphenylhydrazine[C]	0	--	--	5.4E+00	--	--	2.8E+02	--	--	--	--	--	--	--	--	2.8E+02
Alpha-Endosulfan	0	3.4E-02	8.7E-03	2.4E+02	6.8E-02	4.4E-01	1.2E+04	--	--	--	--	--	--	6.8E-02	4.4E-01	1.2E+04

Parameter	Background	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
(ug/l unless noted)	Conc.	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH
Beta-Endosulfan	0	3.4E-02	8.7E-03	2.4E+02	6.8E-02	4.4E-01	1.2E+04	--	--	--	--	--	--	6.8E-02	4.4E-01	1.2E+04
Endosulfan Sulfate	0	--	--	2.4E+02	--	--	1.2E+04	--	--	--	--	--	--	--	--	1.2E+04
Endrin	0	3.7E-02	2.3E-03	8.1E-01	7.4E-02	1.2E-01	4.1E+01	--	--	--	--	--	--	7.4E-02	1.2E-01	4.1E+01
Endrin Aldehyde	0	--	--	8.1E-01	--	--	4.1E+01	--	--	--	--	--	--	--	--	4.1E+01
Ethylbenzene	0	--	--	2.9E+04	--	--	1.5E+06	--	--	--	--	--	--	--	--	1.5E+06
Fluoranthene	0	--	--	3.7E+02	--	--	1.9E+04	--	--	--	--	--	--	--	--	1.9E+04
Fluorene	0	--	--	1.4E+04	--	--	7.1E+05	--	--	--	--	--	--	--	--	7.1E+05
Guthion	0	--	1.0E-02	--	--	5.1E-01	--	--	--	--	--	--	--	--	5.1E-01	--
Heptachlor [C]	0	5.3E-02	3.6E-03	2.1E-03	1.1E-01	1.8E-01	1.1E-01	--	--	--	--	--	--	1.1E-01	1.8E-01	1.1E-01
Heptachlor Epoxide[C]	0	5.3E-02	3.6E-03	1.1E-03	1.1E-01	1.8E-01	5.6E-02	--	--	--	--	--	--	1.1E-01	1.8E-01	5.6E-02
Hexachlorobenzene[C]	0	--	--	7.7E-03	--	--	3.9E-01	--	--	--	--	--	--	--	--	3.9E-01
Hexachlorobutadiene[C]	0	--	--	5.0E+02	--	--	2.6E+04	--	--	--	--	--	--	--	--	2.6E+04
Hexachlorocyclohexane Alpha-BHC[C]	0	--	--	1.3E-01	--	--	6.6E+00	--	--	--	--	--	--	--	--	6.6E+00
Hexachlorocyclohexane Beta-BHC[C]	0	--	--	4.6E-01	--	--	2.3E+01	--	--	--	--	--	--	--	--	2.3E+01
Hexachlorocyclohexane Gamma-BHC[C] (Lindane)	0	1.6E-01	--	6.3E-01	3.2E-01	--	3.2E+01	--	--	--	--	--	--	3.2E-01	--	3.2E+01
Hexachlorocyclopentadiene	0	--	--	1.7E+04	--	--	8.7E+05	--	--	--	--	--	--	--	--	8.7E+05
Hexachloroethane[C]	0	--	--	8.9E+01	--	--	4.5E+03	--	--	--	--	--	--	--	--	4.5E+03
Hydrogen Sulfide	0	--	2.0E+00		--	1.0E+02	--	--	--	--	--	--	--	--	1.0E+02	--
Indeno (1,2,3-cd) pyrene C	0	--	--	4.9E-01	--	--	2.5E+01	--	--	--	--	--	--	--	--	2.5E+01
Isophorone[C]	0	--	--	2.6E+04	--	--	1.3E+06	--	--	--	--	--	--	--	--	1.3E+06
Kepone	0	--	0.0E+00	--	--	0.0E+00	--	--	--	--	--	--	--	--	0.0E+00	--
Lead	0	2.4E+02	9.3E+00	--	4.8E+02	4.7E+02	--	--	--	--	--	--	--	4.8E+02	4.7E+02	--
Malathion	0	--	1.0E-01	--	--	5.1E+00	--	--	--	--	--	--	--	--	5.1E+00	--
Mercury	0	1.8E+00	9.4E-01	5.1E-02	3.6E+00	4.8E+01	2.6E+00	--	--	--	--	--	--	3.6E+00	4.8E+01	2.6E+00
Methyl Bromide	0	--	--	4.0E+03	--	--	2.0E+05	--	--	--	--	--	--	--	--	2.0E+05
Methoxychlor	0	--	3.0E-02	--	--	1.5E+00	--	--	--	--	--	--	--	--	1.5E+00	--
Mirex	0	--	0.0E+00	--	--	0.0E+00	--	--	--	--	--	--	--	--	0.0E+00	--
Monochlorobenzene	0	--	--	2.1E+04	--	--	1.1E+06	--	--	--	--	--	--	--	--	1.1E+06
Nickel	0	7.4E+01	8.2E+00	4.6E+03	1.5E+02	4.2E+02	2.3E+05	--	--	--	--	--	--	1.5E+02	4.2E+02	2.3E+05
Nitrobenzene	0	--	--	1.9E+03	--	--	9.7E+04	--	--	--	--	--	--	--	--	9.7E+04
N-Nitrosodimethylamine[C]	0	--	--	8.1E+01	--	--	4.1E+03	--	--	--	--	--	--	--	--	4.1E+03
N-Nitrosodiphenylamine[C]	0	--	--	1.6E+02	--	--	8.2E+03	--	--	--	--	--	--	--	--	8.2E+03
N-Nitrosodi-n-propylamine[C]	0	--	--	1.4E+01	--	--	7.1E+02	--	--	--	--	--	--	--	--	7.1E+02
Parathion	0			--			--	--	--	--	--	--	--	--	--	--
PCB-1016	0	--	3.0E-02	--	--	1.5E+00	--	--	--	--	--	--	--	--	1.5E+00	--
PCB-1221	0	--	3.0E-02	--	--	1.5E+00	--	--	--	--	--	--	--	--	1.5E+00	--
PCB-1232	0	--	3.0E-02	--	--	1.5E+00	--	--	--	--	--	--	--	--	1.5E+00	--
PCB-1242	0	--	3.0E-02	--	--	1.5E+00	--	--	--	--	--	--	--	--	1.5E+00	--
PCB-1248	0	--	3.0E-02	--	--	1.5E+00	--	--	--	--	--	--	--	--	1.5E+00	--
PCB-1254	0	--	3.0E-02	--	--	1.5E+00	--	--	--	--	--	--	--	--	1.5E+00	--

Parameter	Background	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
(ug/l unless noted)	Conc.	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH
PCB-1260	0	--	3.0E-02	--	--	1.5E+00	--	--	--	--	--	--	--	--	1.5E+00	--
PCB Total[C]	0	--	--	1.7E-03	--	--	8.7E-02	--	--	--	--	--	--	--	--	8.7E-02
Pentachlorophenol [C]	0	1.3E+01	7.9E+00	8.2E+01	2.6E+01	4.0E+02	4.2E+03	--	--	--	--	--	--	2.6E+01	4.0E+02	4.2E+03
Phenol	0	--	--	4.6E+06	--	--	2.3E+08	--	--	--	--	--	--	--	--	2.3E+08
Phosphorus (Elemental)	0	--	0.1	--	--	5.1E+00	--	--	--	--	--	--	--	--	5.1E+00	--
Pyrene	0	--	--	1.1E+04	--	--	5.6E+05	--	--	--	--	--	--	--	--	5.6E+05
Radionuclides (pCi/l except Beta/Photon)	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Gross Alpha Activity	0	--	--	1.5E+01	--	--	7.7E+02	--	--	--	--	--	--	--	--	7.7E+02
Beta and Photon Activity (mrem/yr)	0	--	--	4.0E+00	--	--	2.0E+02	--	--	--	--	--	--	--	--	2.0E+02
Strontium-90	0	--	--	8.0E+00	--	--	4.1E+02	--	--	--	--	--	--	--	--	4.1E+02
Tritium	0	--	--	2.0E+04	--	--	1.0E+06	--	--	--	--	--	--	--	--	1.0E+06
Selenium	0	3.0E+02	7.1E+01	1.1E+04	6.0E+02	3.6E+03	5.6E+05	--	--	--	--	--	--	6.0E+02	3.6E+03	5.6E+05
Silver	0	2.0E+00	--	--	4.0E+00	--	--	--	--	--	--	--	--	4.0E+00	--	--
1,1,2,2-Tetrachloroethane[C]	0	--	--	1.1E+02	--	--	5.6E+03	--	--	--	--	--	--	--	--	5.6E+03
Tetrachloroethylene[C]	0	--	--	8.9E+01	--	--	4.5E+03	--	--	--	--	--	--	--	--	4.5E+03
Thallium	0	--	--	6.3E+00	--	--	3.2E+02	--	--	--	--	--	--	--	--	3.2E+02
Toluene	0	--	--	2.0E+05	--	--	1.0E+07	--	--	--	--	--	--	--	--	1.0E+07
Toxaphene [C]	0	2.1E-01	2.0E-04	7.5E-03	4.2E-01	1.0E-02	3.8E-01	--	--	--	--	--	--	4.2E-01	1.0E-02	3.8E-01
Tributyltin	0	3.8E-01	1.0E-03	--	7.6E-01	5.1E-02	--	--	--	--	--	--	--	7.6E-01	5.1E-02	--
1,2,4-Trichlorobenzene	0	--	--	9.4E+02	--	--	4.8E+04	--	--	--	--	--	--	--	--	4.8E+04
1,1,2-Trichloroethane[C]		--	--	4.2E+02	--	--	2.1E+04	--	--	--	--	--	--	--	--	2.1E+04
Trichloroethylene [C]	0	--	--	8.1E+02	--	--	4.1E+04	--	--	--	--	--	--	--	--	4.1E+04
2,4,6-Trichlorophenol [C]	0	--	--	6.5E+01	--	--	3.3E+03	--	--	--	--	--	--	--	--	3.3E+03
Vinyl Chloride[C]	0	--	--	6.1E+01	--	--	3.1E+03	--	--	--	--	--	--	--	--	3.1E+03
Zinc	0	9.0E+01	8.1E+01	6.9E+04	1.8E+02	4.1E+03	3.5E+06	--	--	--	--	--	--	1.8E+02	4.1E+03	3.5E+06

Notes:

1. All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise
2. Discharge flow is highest monthly average or Form 2C maximum for Industries and design flow for Municipals
3. Metals measured as Dissolved, unless specified otherwise
4. "C" indicates a carcinogenic parameter
5. For transition zone waters, spreadsheet prints the lesser of the freshwater and saltwater water quality criteria.
6. Regular WLA = (WQC x WLA multiplier) - (WLA multiplier - 1)(background conc.)
7. Antideg. Baseline = (0.25(WQC - background conc.) + background conc.) for acute and chronic
   = (0.1(WQC - background conc.) + background conc.) for human health
8. Antideg. WLA = (Antideg. Baseline)(WLA multiplier) - (WLA multiplier - 1)(background conc.)

Metal	Site Specific Target Value (SSTV)
Antimony	2.2E+05
Arsenic III	5.5E+01
Cadmium	3.2E+01
Chromium III	#VALUE!
Chromium VI	8.8E+02
Copper	7.4E+00
Lead	1.9E+02
Mercury	1.4E+00
Nickel	5.9E+01
Selenium	2.4E+02
Silver	1.6E+00
Zinc	7.2E+01

Note: do not use QL's lower than the minimum QL's provided in agency guidance

5/28/2008 9:58:50 AM

Facility = Mizpah Nursing Home STP
Chemical = Ammonia
Chronic averaging period = 30
WLAa = 4.5
WLAc = 20
Q.L. = 0.2
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value = 9
Variance = 29.16
C.V. = 0.6
97th percentile daily values = 21.9007
97th percentile 4 day average = 14.9741
97th percentile 30 day average= 10.8544
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Acute Toxicity
Maximum Daily Limit = 4.5
Average Weekly limit = 4.5
Average Monthly LImit = 4.5

The data are:

9

3/13/2008 9:07:23 AM

Facility = Mizpah Nursing Home STP
Chemical = TRC
Chronic averaging period = 4
WLAa = 26
WLAc = 380
Q.L. = 100
# samples/mo. = 30
# samples/wk. = 8

Summary of Statistics:

observations = 1
Expected Value = 20000
Variance = 1440000
C.V. = 0.6
97th percentile daily values = 48668.3
97th percentile 4 day average = 33275.8
97th percentile 30 day average= 24121.0
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Acute Toxicity
Maximum Daily Limit = 26
Average Weekly limit = 15.5091322334578
Average Monthly LImit = 12.8861502605597

The data are:

20000

Mizpah Nursing Home STP - VA00663029
DMR data for TSS and BOD5

	Monthly Average Concentration	
DMR Due Date	BOD5 (mg/L)	TSS (mg/L)
10/10/2003	2	5.66
11/10/2003	2	5.5
12/10/2003	2	4.3
1/10/2004	2	3.8
2/10/2004	2	6
3/10/2004	2	10
4/10/2004	2	5.3
5/10/2004	2	3.7
6/10/2004	2	5.1
7/10/2004	2	3.8
8/10/2004	2	4.1
9/10/2004	2	6.5
10/10/2004	2	2.4
11/10/2004	2	4.4
12/10/2004	2	6
1/10/2005	3	7.3
2/10/2005	2	6.6
3/10/2005	2	9.4
4/10/2005	2	8.7
5/10/2005	2	5.4
6/10/2005	2	9.8
7/10/2005	3	9.5
8/10/2005	11	4.7
9/10/2005	2	3.5
10/10/2005	2	4.4
11/10/2005	2	5.1
12/10/2005	3	8.8
1/10/2006	2	11.5
2/10/2006	2	7.6
3/10/2006	2	11.4
4/10/2006	2	15.1
5/10/2006	3	17.8
6/10/2006	2	7.8
7/10/2006	2	4.5
8/10/2006	3	6.5
9/10/2006	2	4.9
10/10/2006	2	9.7
11/10/2006	2	11.5
12/10/2006	3	7
1/10/2007	2	14.8
2/10/2007	2	7.9
3/10/2007	2	8.2
4/10/2007	3	12.6
5/10/2007	3	17.8
6/10/2007	2	8.7
7/10/2007	2	7.9
8/10/2007	2	6.4
9/10/2007	2	3.3
10/10/2007	2	6.3
11/10/2007	2	8.9
12/10/2007	4	10.7
1/10/2008	2	10.4
2/10/2008	2	6

Parameter -->	BOD5

Enter Data Below	
Current Monthly Average Concentration Limit (mg/L)	**Current Monitoring Frequency (Use the format "#/wk" or "#/month")**
30	1/Month

DMR Due Date (optional)	Monthly Average Concentration
10/10/2003	2
11/10/2003	2
12/10/2003	2
1/10/2004	2
2/10/2004	2
3/10/2004	2
4/10/2004	2
5/10/2004	2
6/10/2004	2
7/10/2004	2
8/10/2004	2
9/10/2004	2
10/10/2004	2
11/10/2004	2
12/10/2004	2
1/10/2005	3
2/10/2005	2
3/10/2005	2
4/10/2005	2
5/10/2005	2
6/10/2005	2
7/10/2005	3
8/10/2005	11
9/10/2005	2
10/10/2005	2
11/10/2005	2
12/10/2005	3
1/10/2006	2
2/10/2006	2
3/10/2006	2
4/10/2006	2
5/10/2006	3
6/10/2006	2
7/10/2006	2
8/10/2006	3
9/10/2006	2
10/10/2006	2
11/10/2006	2
12/10/2006	3
1/10/2007	2
2/10/2007	2
3/10/2007	2
4/10/2007	3
5/10/2007	3
6/10/2007	2
7/10/2007	2
8/10/2007	2
9/10/2007	2
10/10/2007	2
11/10/2007	2
12/10/2007	4
1/10/2008	2
2/10/2008	2

Results

Data Average	Ratio of Long Term Average to Monthly Average Limit (%)	**Allowed Reduction**
2.358490566	7.9	**1/6months**

Table 1. Ratio of Long Term Average to Monthly Average Limit

Baseline Monitoring	75-66%	65-50%	49-25%	<25%
7/wk	5/wk	4/wk	3/wk	1/wk
6/wk	4/wk	3/wk	2/wk	1/wk
5/wk	4/wk	3/wk	2/wk	1/wk
4/wk	3/wk	2/wk	1/wk	1/wk
3/wk	3/wk	2/wk	1/wk	1/wk
2/wk	2/wk	1/wk	2/mo	1/mo
1/wk	1/wk	1/wk	2/mo	1/2mos
2/month	2/mo	2/mo	2/mo	1/quarter
1/month	1/mo	1/mo	1/quarter	1/6mos

The baseline monitoring frequencies in Table 1 will normally be considered the level of monitoring in the existing effective VPDES permit. It is important to recognize that permittees who receive monitoring frequency reductions in accordance with Table 1 are still expected to take all appropriate measures to control both the average level of pollutants of concern in their discharge (mean) as well as the variability of such parameters in the discharge (variance), regardless of any reductions in monitoring frequencies granted from the baseline levels. Data collected on a quarterly basis is not included in the baseline frequencies because it is not frequent enough to develop valid reduced monitoring statistics.

Parameter -->	TSS

Enter Data Below	
Current Monthly Average Concentration Limit (mg/L)	**Current Monitoring Frequency (Use the format "#/wk" or "#/month")**
30	1/Month

DMR Due Date (optional)	Monthly Average Concentration
10/10/2003	5.66
11/10/2003	5.5
12/10/2003	4.3
1/10/2004	3.8
2/10/2004	6
3/10/2004	10
4/10/2004	5.3
5/10/2004	3.7
6/10/2004	5.1
7/10/2004	3.8
8/10/2004	4.1
9/10/2004	6.5
10/10/2004	2.4
11/10/2004	4.4
12/10/2004	6
1/10/2005	7.3
2/10/2005	6.6
3/10/2005	9.4
4/10/2005	8.7
5/10/2005	5.4
6/10/2005	9.8
7/10/2005	9.5
8/10/2005	4.7
9/10/2005	3.5
10/10/2005	4.4
11/10/2005	5.1
12/10/2005	8.8
1/10/2006	11.5
2/10/2006	7.6
3/10/2006	11.4
4/10/2006	15.1
5/10/2006	17.8
6/10/2006	7.8
7/10/2006	4.5
8/10/2006	6.5
9/10/2006	4.9
10/10/2006	9.7
11/10/2006	11.5
12/10/2006	7
1/10/2007	14.8
2/10/2007	7.9
3/10/2007	8.2
4/10/2007	12.6
5/10/2007	17.8
6/10/2007	8.7
7/10/2007	7.9
8/10/2007	6.4
9/10/2007	3.3
10/10/2007	6.3
11/10/2007	8.9
12/10/2007	10.7
1/10/2008	10.4
2/10/2008	6

Results

Data Average	Ratio of Long Term Average to Monthly Average Limit (%)	**Allowed Reduction**
7.640754717	25.5	**1/quarter**

Table 1. Ratio of Long Term Average to Monthly Average Limit

Baseline Monitoring	75-66%	65-50%	49-25%	<25%
7/wk	5/wk	4/wk	3/wk	1/wk
6/wk	4/wk	3/wk	2/wk	1/wk
5/wk	4/wk	3/wk	2/wk	1/wk
4/wk	3/wk	2/wk	1/wk	1/wk
3/wk	3/wk	2/wk	1/wk	1/wk
2/wk	2/wk	1/wk	2/mo	1/mo
1/wk	1/wk	1/wk	2/mo	1/2mos
2/month	2/mo	2/mo	2/mo	1/quarter
1/month	1/mo	1/mo	1/quarter	1/6mos

The baseline monitoring frequencies in Table 1 will normally be considered the level of monitoring in the existing effective VPDES permit. It is important to recognize that permittees who receive monitoring frequency reductions in accordance with Table 1 are still expected to take all appropriate measures to control both the average level of pollutants of concern in their discharge (mean) as well as the variability of such parameters in the discharge (variance), regardless of any reductions in monitoring frequencies granted from the baseline levels. Data collected on a quarterly basis is not included in the baseline frequencies because it is not frequent enough to develop valid reduced monitoring statistics.

Revised 2/2003

State "Transmittal Checklist" to Assist in Targeting Municipal and Industrial Individual NPDES Draft Permits for Review

Part I. State Draft Permit Submission Checklist

In accordance with the MOA established between the Commonwealth of Virginia and the United States Environmental Protection Agency, Region III, the Commonwealth submits the following draft National Pollutant Discharge Elimination System (NPDES) permit for Agency review and concurrence.

Facility Name: Mizpah Nursing Home STP

NPDES Permit Number: VA0063029

Permit Writer Name: Jeremy Kazio

Date: March 17, 2008

Major [ ] **Minor** [X] **Industrial** [ ] **Municipal** [X]

I.A. Draft Permit Package Submittal Includes:	Yes	No	N/A
1. Permit Application?	X		
2. Complete Draft Permit (for renewal or first time permit – entire permit, including boilerplate information)?	X		
3. Copy of Public Notice?		X	
4. Complete Fact Sheet?	X		
5. A Priority Pollutant Screening to determine parameters of concern?			X
6. A Reasonable Potential analysis showing calculated WQBELs?	X		
7. Dissolved Oxygen calculations?		X	
8. Whole Effluent Toxicity Test summary and analysis?			X
9. Permit Rating Sheet for new or modified industrial facilities?			X

I.B. Permit/Facility Characteristics	Yes	No	N/A
1. Is this a new or currently unpermitted facility?		X	
2. Are all permissible outfalls (including combined sewer overflow points, non-process water and storm water) from the facility properly identified and authorized in the permit?	X		
3. Does the fact sheet **or** permit contain a description of the wastewater treatment process?	X		

I.B. Permit/Facility Characteristics – cont.	Yes	No	N/A
4. Does the review of PCS/DMR data for at least the last 3 years indicate significant non-compliance with the existing permit?		X	
5. Has there been any change in streamflow characteristics since the last permit was developed?		X	
6. Does the permit allow the discharge of new or increased loadings of any pollutants?	X		
7. Does the fact sheet **or** permit provide a description of the receiving water body(s) to which the facility discharges, including information on low/critical flow conditions and designated/existing uses?	X		
8. Does the facility discharge to a 303(d) listed water?	X		
a. Has a TMDL been developed and approved by EPA for the impaired water?		X	
b. Does the record indicate that the TMDL development is on the State priority list and will most likely be developed within the life of the permit?		X	
c. Does the facility discharge a pollutant of concern identified in the TMDL or 303(d) listed water?	X		
9. Have any limits been removed, or are any limits less stringent, than those in the current permit?		X	
10. Does the permit authorize discharges of storm water?		X	
11. Has the facility substantially enlarged or altered its operation or substantially increased its flow or production?		X	
12. Are there any production-based, technology-based effluent limits in the permit?	X		
13. Do any water quality-based effluent limit calculations differ from the State's standard policies or procedures?		X	
14. Are any WQBELs based on an interpretation of narrative criteria?		X	
15. Does the permit incorporate any variances or other exceptions to the State's standards or regulations?		X	
16. Does the permit contain a compliance schedule for any limit or condition?	X		
17. Is there a potential impact to endangered/threatened species or their habitat by the facility's discharge(s)?		X	
18. Have impacts from the discharge(s) at downstream potable water supplies been evaluated?	X		
19. Is there any indication that there is significant public interest in the permit action proposed for this facility?		X	
20. Have previous permit, application, and fact sheet been examined?	X		

Part II. NPDES Draft Permit Checklist

Region III NPDES Permit Quality Checklist – for POTWs

(To be completed and included in the record only for POTWs)

II.A. Permit Cover Page/Administration	Yes	No	N/A
1. Does the fact sheet or permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)?	X		
2. Does the permit contain specific authorization-to-discharge information (from where to where, by whom)?	X		

II.B. Effluent Limits – General Elements	Yes	No	N/A
1. Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)?	X		
2. Does the fact sheet discuss whether "antibacksliding" provisions were met for any limits that are less stringent than those in the previous NPDES permit?	X		

II.C. Technology-Based Effluent Limits (POTWs)	Yes	No	N/A
1. Does the permit contain numeric limits for ALL of the following: BOD (or alternative, e.g., CBOD, COD, TOC), TSS, and pH?	X		
2. Does the permit require at least 85% removal for BOD (or BOD alternative) and TSS (or 65% for equivalent to secondary) consistent with 40 CFR Part 133?	X		
a. If no, does the record indicate that application of WQBELs, or some other means, results in more stringent requirements than 85% removal or that an exception consistent with 40 CFR 133.103 has been approved?			X
3. Are technology-based permit limits expressed in the appropriate units of measure (e.g., concentration, mass, SU)?	X		
4. Are permit limits for BOD and TSS expressed in terms of both long term (e.g., average monthly) and short term (e.g., average weekly) limits?	X		
5. Are any concentration limitations in the permit less stringent than the secondary treatment requirements (30 mg/l BOD5 and TSS for a 30-day average and 45 mg/l BOD5 and TSS for a 7-day average)?		X	
a. If yes, does the record provide a justification (e.g., waste stabilization pond, trickling filter, etc.) for the alternate limitations?			X

II.D. Water Quality-Based Effluent Limits	Yes	No	N/A
1. Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality?	X		
2. Does the fact sheet indicate that any WQBELs were derived from a completed and EPA approved TMDL?		X	

II.D. Water Quality-Based Effluent Limits – cont.	Yes	No	N/A
3. Does the fact sheet provide effluent characteristics for each outfall?	X		
4. Does the fact sheet document that a "reasonable potential" evaluation was performed?	X		
a. If yes, does the fact sheet indicate that the "reasonable potential" evaluation was performed in accordance with the State's approved procedures?	X		
b. Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone?	X		
c. Does the fact sheet present WLA calculation procedures for all pollutants that were found to have "reasonable potential"?	X		
d. Does the fact sheet indicate that the "reasonable potential" and WLA calculations accounted for contributions from upstream sources (i.e., do calculations include ambient/background concentrations)?		X	
e. Does the permit contain numeric effluent limits for all pollutants for which "reasonable potential" was determined?	X		
5. Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet?	X		
6. For all final WQBELs, are BOTH long-term AND short-term effluent limits established?	X		
7. Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)?	X		
8. Does the record indicate that an "antidegradation" review was performed in accordance with the State's approved antidegradation policy?	X		

II.E. Monitoring and Reporting Requirements	Yes	No	N/A
1. Does the permit require at least annual monitoring for all limited parameters and other monitoring as required by State and Federal regulations?	X		
a. If no, does the fact sheet indicate that the facility applied for and was granted a monitoring waiver, AND, does the permit specifically incorporate this waiver?			X
2. Does the permit identify the physical location where monitoring is to be performed for each outfall?	X		
3. Does the permit require at least annual influent monitoring for BOD (or BOD alternative) and TSS to assess compliance with applicable percent removal requirements?		X	
4. Does the permit require testing for Whole Effluent Toxicity?		X	

II.F. Special Conditions	Yes	No	N/A
1. Does the permit include appropriate biosolids use/disposal requirements?	X		
2. Does the permit include appropriate storm water program requirements?			X

II.F. Special Conditions – cont.	Yes	No	N/A
3. If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements?	X		
4. Are other special conditions (e.g., ambient sampling, mixing studies, TIE/TRE, BMPs, special studies) consistent with CWA and NPDES regulations?	X		
5. Does the permit allow/authorize discharge of sanitary sewage from points other than the POTW outfall(s) or CSO outfalls [i.e., Sanitary Sewer Overflows (SSOs) or treatment plant bypasses]?		X	
6. Does the permit authorize discharges from Combined Sewer Overflows (CSOs)?		X	
a. Does the permit require implementation of the "Nine Minimum Controls"?			X
b. Does the permit require development and implementation of a "Long Term Control Plan"?			X
c. Does the permit require monitoring and reporting for CSO events?			X
7. Does the permit include appropriate Pretreatment Program requirements?			X

II.G. Standard Conditions	Yes	No	N/A
1. Does the **permit** contain all 40 CFR 122.41 standard conditions or the State equivalent (or more stringent) conditions?	X		

List of Standard Conditions – 40 CFR 122.41

Duty to comply
Duty to reapply
Need to halt or reduce activity not a defense
Duty to mitigate
Proper O & M
Permit actions

Property rights
Duty to provide information
Inspections and entry
Monitoring and records
Signatory requirement
Bypass
Upset

Reporting Requirements
Planned change
Anticipated noncompliance
Transfers
Monitoring reports
Compliance schedules
24-Hour reporting
Other non-compliance

2. Does the permit contain the additional standard condition (or the State equivalent or more stringent conditions) for POTWs regarding notification of new introduction of pollutants and new industrial users [40 CFR 122.42(b)]?	X		

Part II. Signature Page

Based on a review of the data and other information submitted by the permit applicant, and the draft permit and other administrative records generated by the Department/Division and/or made available to the Department/Division, the information provided on this checklist is accurate and complete, to the best of my knowledge.

Name	Jeremy Kazio
Title	Environmental Specialist II
Signature	
Date	March 17, 2008

Please print or type in the unshaded areas only.

Form Approved. OMB No. 2040-0086.

FORM 1 GENERAL

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER

S		T/A	C
F			D

1 2 13 14 15

LABEL ITEMS	
I. EPA I.D. NUMBER	PLEASE PLACE LABEL IN THIS SPACE
III. FACILITY NAME	
V. FACILITY MAILING ADDRESS	
VI. FACILITY LOCATION	

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of **bold-faced terms**.

SPECIFIC QUESTIONS	Mark "X" YES	NO	FORM ATTACHED
A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters of the U.S.**? (FORM 2A)	16	X 17	18
B. Does or will this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a **discharge** to **waters of the U.S.**? (FORM 2B)	19	X 20	21
C. Is this a facility which currently results in **discharges** to **waters of the U.S.** other than those described in A or B above? (FORM 2C)	22	X 23	24
D. Is this a proposed facility *(other than those described in A or B above)* which will result in a **discharge** to **waters of the U.S.**? (FORM 2D)	25	X 26	27
E. Does or will this facility treat, store, or dispose of **hazardous wastes**? (FORM 3)	28	X 29	30
F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)	31	X 32	33
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)	34	X 35	36
H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)	37	X 38	39
I. Is this facility a proposed **stationary source** which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)	40	X 41	42
J. Is this facility a proposed **stationary source** which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an **attainment area**? (FORM 5)	43	X 44	45

III. NAME OF FACILITY

C 1 SKIP: MIZPAH NURSING HOME, INC.

15 16 – 29 30 69

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*: C 2 DAVIS, JOHN D

15 16 45

B. PHONE *(area code & no.)*: (804) 758-5260

46 48 49 51 52- 55

V. FACILTY MAILING ADDRESS

A. STREET OR P.O. BOX: C 3 P.O. BOX 70

15 16 45

B. CITY OR TOWN: C 4 LOCUST HILL

15 16 40

C. STATE: VA

41 42

D. ZIP CODE: 23092

47 51

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER: C 5 74 MIZPAH ROAD

15 16 45

B. COUNTY NAME: MIDDLESEX

46 70

C. CITY OR TOWN: C 6 LOCUST HILL

15 16 40

D. STATE: VA

41 42

E. ZIP CODE: 23092

47 51

F. COUNTY CODE *(if known)*

52 -54

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

VII. SIC CODES *(4-digit, in order of priority)*

A. FIRST	B. SECOND
7 *(specify)*	7 *(specify)*
C. THIRD	**D. FOURTH**
7 *(specify)*	7 *(specify)*

VIII. OPERATOR INFORMATION

A. NAME: JOHN D. DAVIS

B. Is the name listed in Item VIII-A also the owner? ☐ YES ☑ NO

C. STATUS OF OPERATOR *(Enter the appropriate letter into the answer box: if "Other," specify.)*

F = FEDERAL
S = STATE
P = PRIVATE
M = PUBLIC *(other than federal or state)*
O = OTHER *(specify)*

P *(specify)*

D. PHONE *(area code & no.)*: A (804) 815-8593

E. STREET OR P.O. BOX: 5621 GENERAL PULLER HWY. P.O. BOX 33

F. CITY OR TOWN: LOCUST HILL

G. STATE: VA

H. ZIP CODE: 23092

IX. INDIAN LAND

Is the facility located on Indian lands? ☐ YES ☑ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES *(Discharges to Surface Water)*	D. PSD *(Air Emissions from Proposed Sources)*
9 N VA0063029	9 P
B. UIC *(Underground Injection of Fluids)*	**E. OTHER** *(specify)*
9 U	9 83-0356-14 *(specify)* ARMY CORP FOR DISCHARGE PIPE IN RIVER BOTTOM
C. RCRA *(Hazardous Wastes)*	**E. OTHER** *(specify)*
9 R	9 *(specify)*

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers, and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS *(provide a brief description)*

MIZPAH NURSING HOME, INC. IS A 64-BED FACILITY WITH 50 TO 80 EMPLOYEES. THE GRAVITY SEWER COLLECTION SYSTEM CONSISTS OF APPROXIMATELY 315 FEET OF 8-INCH DIAMETER GRAVITY SIDEWALK COLLECTOR DOWN THE FRONT OF THE NURSING HOME AND 450 FEET OF 8-INCH DIAMETER SEWER TO THE SEWAGE TREATMENT PLANT. THE GRAVITY SEWER ALONG THE FRONT OF THE NURSING HOME IS 3.8 TO 10 FEET DEEP AND FROM 6 TO 7.5 FEET DEEP TO THE SEWAGE TREATMENT PLANT. THERE IS AN 8-INCH DIAMETER GATE VALVE ON THIS GRAVITY SEWER AT THE BARSCREEN AREA TO ACTIVATE A SEPTIC TANK DRAINFIELD ON THE INFLUENT SEWER LINE.

XIII. CERTIFICATION *(see instructions)*

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE *(type or print)*	B. SIGNATURE	C. DATE SIGNED
JOHN D. DAVIS WASTEWATER TREATMENT OPER., CL.3	John D Davis Jr	3/5/08

COMMENTS FOR OFFICIAL USE ONLY

C

Form Approved 1/14/99
OMB Number 2040-0086

BASIC APPLICATION INFORMATION

PART A. BASIC APPLICATION INFORMATION FOR ALL APPLICANTS:

All treatment works must complete questions A.1 through A.8 of this Basic Application Information packet.

A.1. Facility Information.

Facility name: MIZPAH NURSING HOME, INC. WASTEWATER TREATMENT PLANT

Mailing Address: P.O. BOX 70
LOCUST HILL, VA 23092

Contact person: JOHN D. DAVIS

Title: OPERATOR

Telephone number: (804) 758-5260

Facility Address (not P.O. Box): 74 MIZPAH ROAD
LOCUST HILL, VA 23092

A.2. Applicant Information. If the applicant is different from the above, provide the following:

Applicant name: MIZPAH NURSING HOME, INC.

Mailing Address: P.O. BOX 70
LOCUST HILL, VA 23092

Contact person: MYRTLE D. FAULKNER

Title: OWNER

Telephone number: (804) 758-5260

Is the applicant the owner or operator (or both) of the treatment works?

✓ owner _____ operator

Indicate whether correspondence regarding this permit should be directed to the facility or the applicant.

✓ facility _____ applicant

A.3. Existing Environmental Permits. Provide the permit number of any existing environmental permits that have been issued to the treatment works (include state-issued permits).

NPDES VA0063029
UIC
RCRA
PSD
Other 83-0356-14 ARMY CORP
Other

A.4. Collection System Information. Provide information on municipalities and areas served by the facility. Provide the name and population of each entity and, if known, provide information on the type of collection system (combined vs. separate) and its ownership (municipal, private, etc.).

Name	Population Served	Type of Collection System	Ownership
MIZPAH NURSING HOME	150	SEPARATE	PRIVATE

Total population served 150

A.5. Indian Country.

a. Is the treatment works located in Indian Country?

_____ Yes ✓ No

b. Does the treatment works discharge to a receiving water that is either in Indian Country or that is upstream from (and eventually flows through) Indian Country?

_____ Yes ✓ No

A.6. Flow. Indicate the design flow rate of the treatment plant (i.e., the wastewater flow rate that the plant was built to handle). Also provide the average daily flow rate and maximum daily flow rate for each of the last three years. Each year's data must be based on a 12-month time period with the 12th month of "this year" occurring no more than three months prior to this application submittal.

a. Design flow rate 0.02 mgd

	Two Years Ago	Last Year	This Year	
b. Annual average daily flow rate	0.0088	0.009	0.0094	mgd
c. Maximum daily flow rate	0.0097	0.01	0.0100	mgd

A.7. Collection System. Indicate the type(s) of collection system(s) used by the treatment plant. Check all that apply. Also estimate the percent contribution (by miles) of each.

✓ Separate sanitary sewer	100 %
_____ Combined storm and sanitary sewer	_____ %

A.8. Discharges and Other Disposal Methods.

a. Does the treatment works discharge effluent to waters of the U.S.? ✓ Yes _____ No

If yes, list how many of each of the following types of discharge points the treatment works uses:

i. Discharges of treated effluent	1
ii. Discharges of untreated or partially treated effluent	0
iii. Combined sewer overflow points	0
iv. Constructed emergency overflows (prior to the headworks)	1
v. Other _____	_____

b. Does the treatment works discharge effluent to basins, ponds, or other surface impoundments that do not have outlets for discharge to waters of the U.S.? _____ Yes ✓ No

If yes, provide the following for each surface impoundment:

Location: _____

Annual average daily volume discharged to surface impoundment(s) N/A mgd

Is discharge _____ continuous or _____ intermittent?

c. Does the treatment works land-apply treated wastewater? _____ Yes ✓ No

If yes, provide the following for each land application site:

Location: _____

Number of acres: _____

Annual average daily volume applied to site: _____ Mgd

Is land application _____ continuous or _____ intermittent?

d. Does the treatment works discharge or transport treated or untreated wastewater to another treatment works? _____ Yes ✓ No

If yes, describe the mean(s) by which the wastewater from the treatment works is discharged or transported to the other treatment works (e.g., tank truck, pipe).

If transport is by a party other than the applicant, provide:

Transporter name:

Mailing Address:

Contact person:

Title:

Telephone number:

For each treatment works that receives this discharge, provide the following:

Name:

Mailing Address:

Contact person:

Title:

Telephone number:

If known, provide the NPDES permit number of the treatment works that receives this discharge.

Provide the average daily flow rate from the treatment works into the receiving facility. _____ mgd

e. Does the treatment works discharge or dispose of its wastewater in a manner not included in A.8.a through A.8.d above (e.g., underground percolation, well injection)? _____ Yes ✓ No

If yes, provide the following for each disposal method:

Description of method (including location and size of site(s) if applicable):

Annual daily volume disposed of by this method:

Is disposal through this method _____ continuous or _____ intermittent?

WASTEWATER DISCHARGES:

If you answered "yes" to question A.8.a, complete questions A.9 through A.12 **once for each outfall** (including bypass points) through which effluent is discharged. Do not include information on combined sewer overflows in this section. **If you answered "no" to question A.8.a**, go to Part B, "Additional Application Information for Applicants with a Design Flow Greater than or Equal to 0.1 mgd."

A.9. Description of Outfall.

a. Outfall number 001

b. Location
LOCUST HILL (City or town, if applicable) 23092 (Zip Code)
MIDDLESEX (County) VA (State)
37° 36' 42" (Latitude) 76° 30' 31" (Longitude)

c. Distance from shore (if applicable) 150 ft.

d. Depth below surface (if applicable) 4 ft.

e. Average daily flow rate .009 mgd

f. Does this outfall have either an intermittent or a periodic discharge? ____ Yes ✓ No (go to A.9.g.)

If yes, provide the following information:

Number of times per year discharge occurs: 365

Average duration of each discharge: CONTINUOUS

Average flow per discharge: .0094 mgd

Months in which discharge occurs: 12

g. Is outfall equipped with a diffuser? ✓ Yes ____ No

A.10. Description of Receiving Waters.

a. Name of receiving water RAPPAHANNOCK RIVER BASIN

b. Name of watershed (if known) RAPPAHANNOCK

United States Soil Conservation Service 14-digit watershed code (if known): NOT KNOWN

c. Name of State Management/River Basin (if known): NOT KNOWN

United States Geological Survey 8-digit hydrologic cataloging unit code (if known): NOT KNOWN

d. Critical low flow of receiving stream (if applicable):
acute N/A cfs chronic N/A cfs

e. Total hardness of receiving stream at critical low flow (if applicable): N/A mg/l of $CaCO_3$

FACILITY NAME AND PERMIT NUMBER:
MIZPAH NURSING HOME, INC. VA0063029

Form Approved 1/14/99
OMB Number 2040-0086

A.11. Description of Treatment.

a. What levels of treatment are provided? Check all that apply.

✓ Primary ____ Secondary

✓ Advanced ____ Other. Describe: ____

b. Indicate the following removal rates (as applicable):

Design BOD_5 removal or Design $CBOD_5$ removal	94	%
Design SS removal	94	%
Design P removal		%
Design N removal		%
Other ____		%

c. What type of disinfection is used for the effluent from this outfall? If disinfection varies by season, please describe.

LIQUID CHLORINE

If disinfection is by chlorination, is dechlorination used for this outfall? ✓ Yes ____ No

d. Does the treatment plant have post aeration? ____ Yes ✓ No

A.12. Effluent Testing Information. All Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three samples and must be no more than four and one-half years apart.

Outfall number: 001

PARAMETER	MAXIMUM DAILY VALUE		AVERAGE DAILY VALUE		
	Value	Units	Value	Units	Number of Samples
pH (Minimum)	6.0	s.u.			
pH (Maximum)	9.0	s.u.			
Flow Rate	0.01	mgd	0.009	mgd	12
Temperature (Winter)	nl	nl	15	C	3
Temperature (Summer)	nl	nl	25	C	3

* For pH please report a minimum and a maximum daily value

POLLUTANT		MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
		Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.								
BIOCHEMICAL OXYGEN	BOD-5	3.0	mg/l	2.33	mg/l	12	5210 B	mg/l
DEMAND (Report one)	CBOD-5							
FECAL COLIFORM		200	n/cml	20.66	n/cml	12	9221 E	mg/l
TOTAL SUSPENDED SOLIDS (TSS)		3.0	mg/l	8.94	mg/l	12	2540 D	mg/l

END OF PART A.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

FACILITY NAME AND PERMIT NUMBER:

Form Approved 1/14/99
OMB Number 2040-0086

BASIC APPLICATION INFORMATION

PART C. CERTIFICATION

All applicants must complete the Certification Section. Refer to instructions to determine who is an officer for the purposes of this certification. All applicants must complete all applicable sections of Form 2A, as explained in the Application Overview. Indicate below which parts of Form 2A you have completed and are submitting. By signing this certification statement, applicants confirm that they have reviewed Form 2A and have completed all sections that apply to the facility for which this application is submitted.

Indicate which parts of Form 2A you have completed and are submitting:

✓ Basic Application Information packet

Supplemental Application Information packet:

_____ Part D (Expanded Effluent Testing Data)

_____ Part E (Toxicity Testing: Biomonitoring Data)

_____ Part F (Industrial User Discharges and RCRA/CERCLA Wastes)

_____ Part G (Combined Sewer Systems)

ALL APPLICANTS MUST COMPLETE THE FOLLOWING CERTIFICATION.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and official title: Myrtle D. Faulkner, Owner

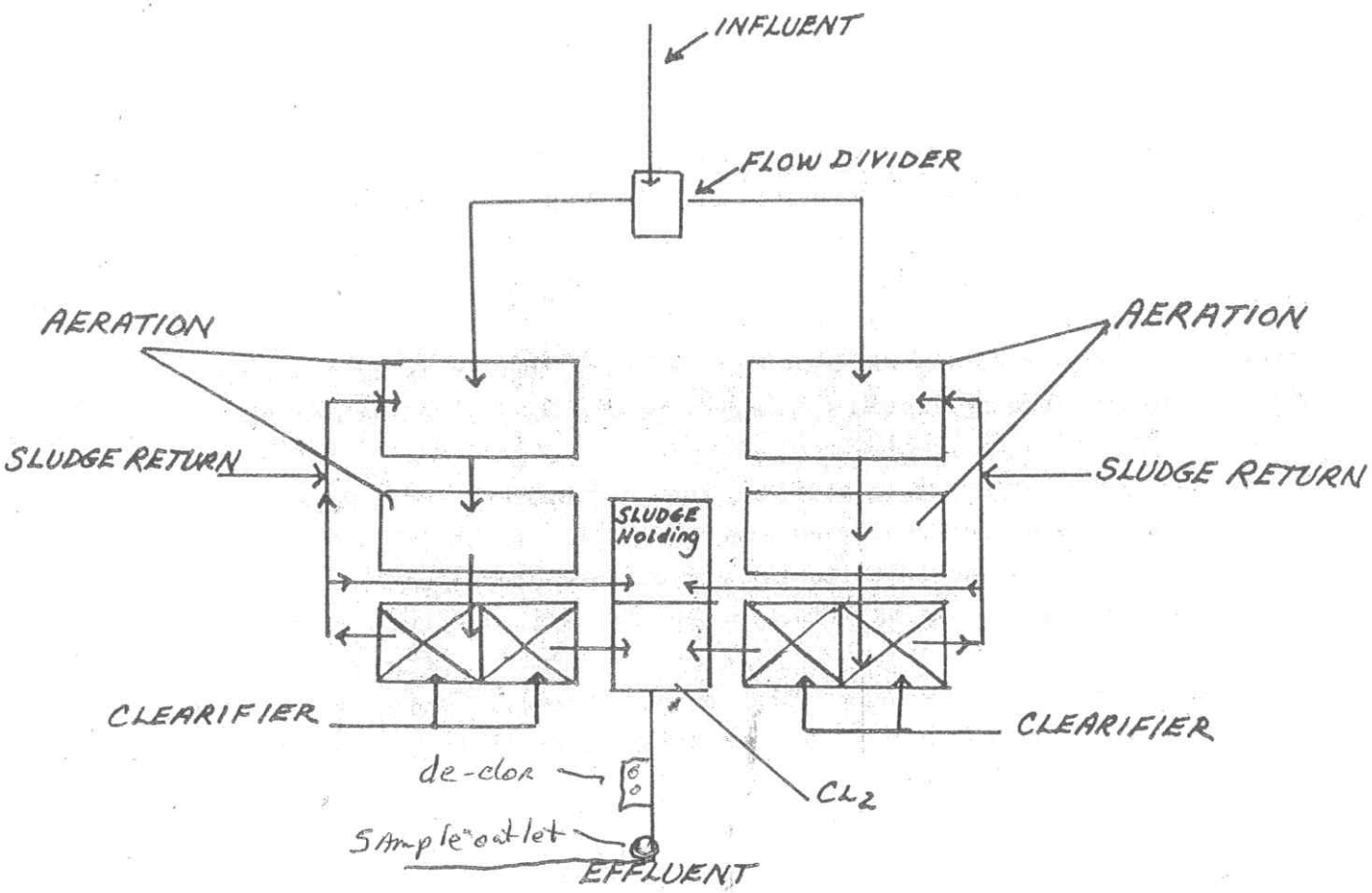
Signature: Myrtle D. Faulkner

Telephone number: (804) 758-5260

Date signed: March 5, 2008

Upon request of the permitting authority, you must submit any other information necessary to assess wastewater treatment practices at the treatment works or identify appropriate permitting requirements.

SEND COMPLETED FORMS TO:



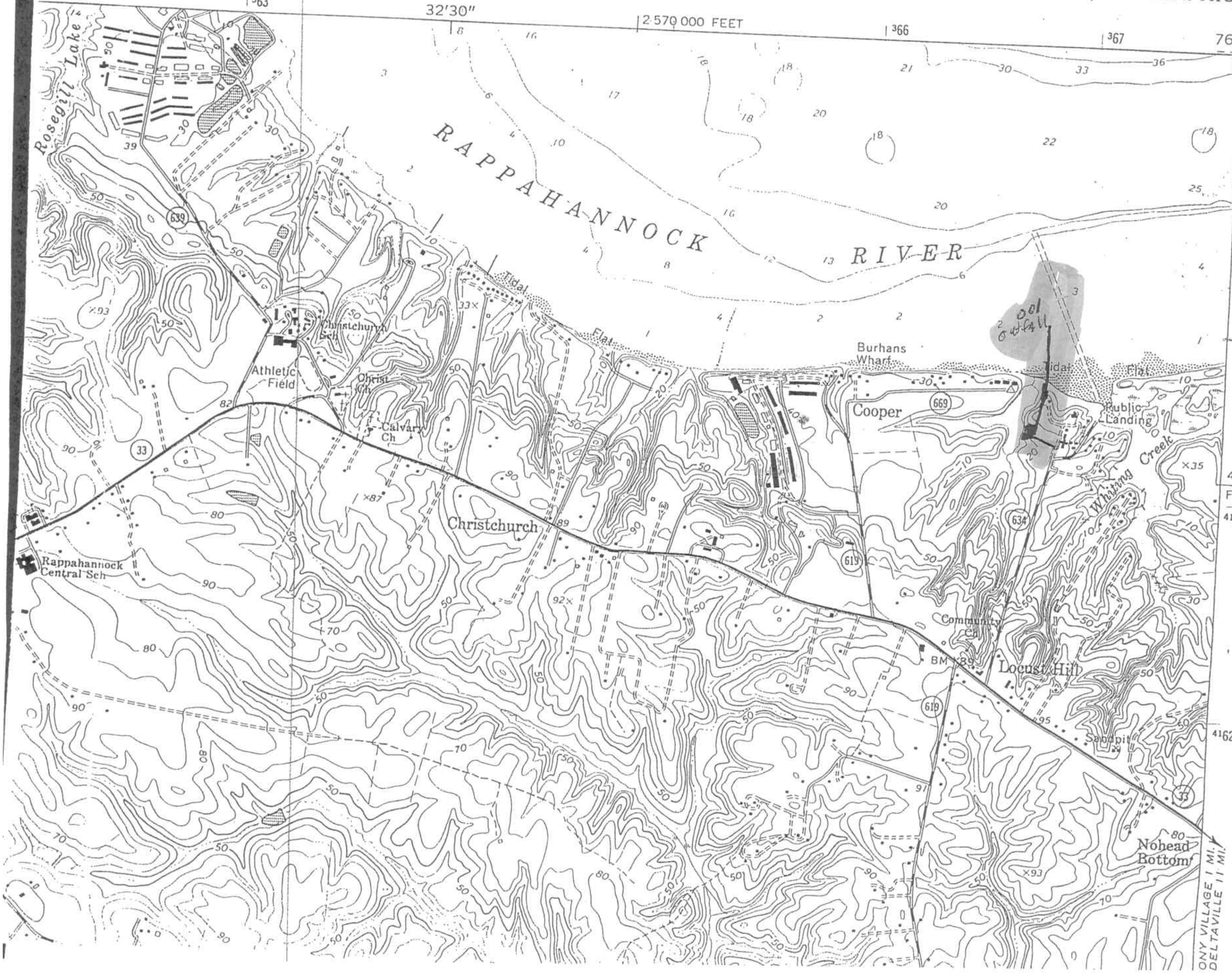
SCHEMATIC FLOW DIAGRAM

NOT TO SCALE

Revised 2-29-08

LTH OF VIRGINIA
NERAL RESOURCES

SALUDA QUADRANGLE
VIRGINIA
7.5 MINUTE SERIES (TOPOGRAPHIC)



- outfall" location

H. Ja

Description of Sewage Treatment Plant

Mizpah Nursing Home Inc. owns a duel train extended aeration wastewater treatment facility at Locust Hill, Virginia. The plant is constructed of 8 concrete tanks which consist of four aeration tanks, 2 settling tanks and 1 chlorine contact tank and a sludge holding tank.

The raw sewage enters the aeration tank or chamber directly, or immediately after a trash intercepting device. The sewage is thoroughly agitated by diffused air bubbling up through liquid causing it to mix as well as become oxidized.

The aerated sewage flows to a settling tank or chamber. The sewage separates behind a baffle and the stabilized sludge settles to the bottom to be returned through air pumps to the inlet to the plant. This sludge is mixed with the raw sewage and immediately begins attacking it. These sludge lines operate continuously.

A portion of the aerated sewage rises behind the baffle and must be hosed or agitated to cause it to settle. This material is partially treated, air filled and greasy and may need skimming.

The clear liquid rising on the opposite side of the baffle is further filtered by a layer of biological sludge which is visible 4 or 5 feet down in the final settling compartment. The clear liquid then flows over a weir and into the chlorine contact tank where it is disinfected then out through a meter box into the outfall pipe where it is discharged.

A scum baffle is front of the weir, serves as a precaution against hydraulic surges which may carry solids over the weir up through the sludge blanket. When particles are carried to the surface of the final tank the skimmer is used for removing them.

If the sludge needs to be removed it is generally accomplished by a scavenger truck. Plant tests will show when, or if, there has been an excessive sludge build-up. Sludge is removed from the hopper in the final tank in small amounts.

Revised 2-29-2008

VPDES Permit Application Addendum

1. **Entity to whom the permit is to be issued:** Mizpah Nursing Home Inc.
Who will be legally responsible for the wastewater treatment facilities and compliance with the permit? This may or may not be the facility or property owner.

2. **Is this facility located within city or town boundaries?** Y / (N)

3. **Provide the tax map parcel number for the land where the discharge is located.**

4. **For the facility to be covered by this permit, how many acres will be disturbed during the next fine years due to new construction activities?** NONE

5. **What is the design average effluent flow of this facility?** 0.02 MGD
For industrial facilities, provide the max. 30-day average production level, include units:

In addition to the design flow or production level, should the permit be written with limits for any other discharge flow tiers or production levels? Y / (N)
If "Yes", please identify the other flow tiers (in MGD) or production levels:

Please consider the following questions for both the flow tiers and the production levels (if applicable): Do you plan to expand operations during the next five years? Is your facility's design flow considerably greater than your current flow?

6. **Nature of operations generating wastewater**:
Nursing Home operation

100 % of flow from domestic connections/sources
Number of private residences to be served by the treatment works:

0 % of flow from non-domestic connections/sources

7. **Mode of discharge**: ✓ Continuous ____ Intermittent ____ Seasonal
Describe frequency and duration of intermittent or seasonal discharges:

8. **Identify the characteristics of the receiving stream at the point just above the facility's discharge point:**
✓ Permanent stream, never dry
__ Intermittent stream, usually flowing, sometimes dry
__ Ephemeral stream, wet-weather flow, often dry
__ Effluent-dependent stream, usually or always dry without effluent flow
__ Lake or pond at or below the discharge point
__
Other:

9. **Approval Date(s):**
O & M Manual _____ **Sludge/Solids Management Plan**
N/A

Have there been any changes in your operations or procedures since the above approval dates?
Y / (N)

FACILITY NAME: Mizpah Nursing Home **VPDES PERMIT NUMBER:** VA0063029

VPDES SEWAGE SLUDGE PERMIT APPLICATION FORM

SCREENING INFORMATION

This application is divided into sections. Sections A pertain to all applicants. The applicability of Sections B, C and D depend on your facility's sewage sludge use or disposal practices. The information provided on this page will help you determine which sections to fill out.

1. All applicants must complete Section A (General Information).

2. Will this facility generate sewage sludge? X Yes __No

   Will this facility derive a material from sewage sludge? __Yes X No

   If you answered Yes to either, complete Section B (Generation Of Sewage Sludge Or Preparation Of A Material Derived From Sewage Sludge).

3. Will this facility apply sewage sludge to the land? __Yes X No

   Will sewage sludge from this facility be applied to the land? __Yes X No

   If you answered No to both questions above, skip Section C.

   If you answered Yes to either, answer the following three questions:

   a. Will the sewage sludge from this facility meet the ceiling concentrations, pollutant concentrations, Class A pathogen reduction requirements and one of the vector attraction reduction requirements 1-8, as identified in the instructions?
   __Yes __No

   b. Will sewage sludge from this facility be placed in a bag or other container for sale or give-away for application to the land? __Yes X No

   c. Will sewage sludge from this facility be sent to another facility for treatment or blending? X Yes __No

   If you answered No to all three, complete Section C (Land Application Of Bulk Sewage Sludge).

   If you answered Yes to a, b or c, skip Section C.

4. Do you own or operate a surface disposal site? __Yes X No

   If Yes, complete Section D (Surface Disposal).

FACILITY NAME: Mizpah Nursing Home **VPDES PERMIT NUMBER:** VA0063029

SECTION A. GENERAL INFORMATION

All applicants must complete this section.

1. Facility Information.
   a. Facility name: Mizpah Nursing Home
   b. Contact person: John D. Davis
      Title: Operator
      Phone: (804) 758-5260
   c. Mailing address:
      Street or P.O. Box: P.O. Box 70
      City or Town: Locust Hill State: VA Zip: 23092
   d. Facility location:
      Street or Route #: 74 Mizpah Rd.
      County: Middlesex
      City or Town: Locust Hill State: VA Zip: 23092
   e. Is this facility a Class I sludge management facility? __Yes X No
   f. Facility design flow rate: .02 mgd
   g. Total population served: 150*
   h. Indicate the type of facility:
      __ Publicly owned treatment works (POTW)
      ✓ Privately owned treatment works
      __ Federally owned treatment works
      __ Blending or treatment operation
      __ Surface disposal site
      __ Other (describe):

2. Applicant Information. If the applicant is different from the above, provide the following:
   a. Applicant name: Myrtle D. Faulkner
   b. Mailing address:
      Street or P.O. Box: P.O. Box 70
      City or Town: Locust Hill State: VA Zip: 23092
   c. Contact person: John D. Davis
      Title: Operator
      Phone: (804) 758-5260
   d. Is the applicant the owner or operator (or both) of this facility?
      ✓ owner _____ operator
   e. Should correspondence regarding this permit be directed to the facility or the applicant? (Check one)
      ✓ facility _____ applicant

3. Permit Information.
   a. Facility's VPDES permit number (if applicable): VA0063029
   b. List on this form or an attachment, all other federal, state or local permits or construction approvals received or applied for that regulate this facility's sewage sludge management practices:

Permit Number:	Type of Permit:

4. Indian Country. Does any generation, treatment, storage, application to land or disposal of sewage sludge from this facility occur in Indian Country? __Yes ✓No If yes, describe:

FACILITY NAME: Mizpah Nursing Home **VPDES PERMIT NUMBER:** VA0063029

5. Topographic Map. Provide a topographic map or maps (or other appropriate maps if a topographic map is unavailable) that shows the following information. Maps should include the area one mile beyond all property boundaries of the facility:
   a. Location of all sewage sludge management facilities, including locations where sewage sludge is generated, stored, treated, or disposed.
   b. Location of all wells, springs, and other surface water bodies listed in public records or otherwise known to the applicant within 1/4 mile of the property boundaries.

6. Line Drawing. Provide a line drawing and/or a narrative description that identifies all sewage sludge processes that will be employed during the term of the permit including all processes used for collecting, dewatering, storing, or treating sewage sludge, the destination(s) of all liquids and solids leaving each unit, and all methods used for pathogen reduction and vector attraction reduction.

7. Contractor Information. Are any operational or maintenance aspects of this facility related to sewage sludge generation, treatment, use or disposal the responsibility of a contractor? X Yes __No
If yes, provide the following for each contractor (attach additional pages if necessary).
Name: Brownley Septic Tank Service
Mailing address:
Street or P.O. Box: PO Box 115
City or Town: Hartfield State: VA Zip: 23071
Phone: (804) 776-9485
Contractor's Federal, State or Local Permit Number(s) applicable to this facility's sewage sludge:
SHP-136-11
If the contractor is responsible for the use and/or disposal of the sewage sludge, provide a description of the service to be provided to the applicant and the respective obligations of the applicant and the contractor(s).

8. Pollutant Concentrations. Using the table below or a separate attachment, provide sewage sludge monitoring data for the pollutants which limits in sewage sludge have been established in 9 VAC 25-31-10 et seq. for this facility's expected use or disposal practices. All data must be based on three or more samples taken at least one month apart and must be no more than four and one-half years old.

POLLUTANT	CONCENTRATION (mg/kg dry weight)	SAMPLE DATE	ANALYTICAL METHOD	DETECTION LEVEL FOR ANALYSIS
Arsenic				
Cadmium				
Chromium				
Copper				
Lead				
Mercury				
Molybdenum				
Nickel				
Selenium				
Zinc				

N/A

9. Certification. Read and submit the following certification statement with this application. Refer to the instructions to determine who is an officer for purposes of this certification. Indicate which parts of the application you have completed and are submitting:

✓ Section A (General Information)
____Section B (Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge)
____Section C (Land Application of Bulk Sewage Sludge)
____Section D (Surface Disposal)

FACILITY NAME: Mizpah Nursing Home **VPDES PERMIT NUMBER:** VA0063029

SECTION B. GENERATION OF SEWAGE SLUDGE OR PREPARATION OF A MATERIAL DERIVED FROM SEWAGE SLUDGE

Complete this section if your facility generates sewage sludge or derives a material from sewage sludge

1. Amount Generated On Site.
   Total dry metric tons per 365-day period generated at your facility:_____ dry metric tons 5,000 gal. pumped & hauled in 2007.

2. Amount Received from Off Site. If your facility receives sewage sludge from another facility for treatment, use or disposal, provide the following information for each facility from which sewage sludge is received. If you receive sewage sludge from more than one facility, attach additional pages as necessary. N/A
   a. Facility name:_____
   b. Contact Person:_____
      Title: _____
      Phone ( )_____
   c. Mailing address:
      Street or P.O. Box:_____
      City or Town:_____ State:_____ Zip:_____
   d. Facility Address:_____
      (not P.O. Box) _____
   e. Total dry metric tons per 365-day period received from this facility:_____ dry metric tons
   f. Describe, on this form or on another sheet of paper, any treatment processes known to occur at the off-site facility, including blending activities and treatment to reduce pathogens or vector attraction characteristics:
      _____
      _____

3. Treatment Provided at Your Facility.
   a. Which class of pathogen reduction is achieved for the sewage sludge at your facility?
      ___Class A ___Class B ___Neither or unknown
   b. Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce pathogens in sewage sludge:_____ N/A
      _____
   c. Which vector attraction reduction option is met for the sewage sludge at your facility?
      ___ Option 1 (Minimum 38 percent reduction in volatile solids)
      ___ Option 2 (Anaerobic process, with bench-scale demonstration)
      ___ Option 3 (Aerobic process, with bench-scale demonstration)
      ___ Option 4 (Specific oxygen uptake rate for aerobically digested sludge)
      ___ Option 5 (Aerobic processes plus raised temperature)
      ___ Option 6 (Raise pH to 12 and retain at 11.5)
      ___ Option 7 (75 percent solids with no unstabilized solids)
      ___ Option 8 (90 percent solids with unstabilized solids)
      ___ None or unknown
   d. Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce vector attraction properties of sewage sludge:_____
      _____
   e. Describe, on this form or another sheet of paper, any other sewage sludge treatment activities, including blending, not identified in a - d above:_____
      _____

4. Preparation of Sewage Sludge Meeting Ceiling and Pollutant Concentrations, Class A Pathogen Requirements and One of Vector Attraction Reduction Options 1-8 (EQ Sludge). N/A
   (If sewage sludge from your facility does not meet all of these criteria, skip Question 4.)
   a. Total dry metric tons per 365-day period of sewage sludge subject to this section that is applied to the land: _____ dry metric tons
   b. Is sewage sludge subject to this section placed in bags or other containers for sale or give-away?

__Yes __No

5. Sale or Give-Away in a Bag or Other Container for Application to the Land.

(Complete this question if you place sewage sludge in a bag or other container for sale or give-away prior to land application. Skip this question if sewage sludge is covered in Question 4.)

N/A a. Total dry metric tons per 365-day period of sewage sludge placed in a bag or other container at your facility for sale or give-away for application to the land:_____ dry metric tons

b. Attach, with this application, a copy of all labels or notices that accompany the sewage sludge being sold or given away in a bag or other container for application to the land.

6. Shipment Off Site for Treatment or Blending.

(Complete this question if sewage sludge from your facility is sent to another facility that provides treatment or blending. This question does not apply to sewage sludge sent directly to a land application or surface disposal site. Skip this question if the sewage sludge is covered in Questions 4 or 5. If you send sewage sludge to more than one facility, attach additional sheets as necessary.)

a. Receiving facility name: R & R Treatment Plant

b. Facility contact: David Bankert
Title: Employee - Scale Tender
Phone: (804) 694-1851

c. Mailing address:
Street or P.O. Box: 5542 Pampa Rd. P.O. Box 1860
City or Town: White Marsh State: VA Zip: 23183

N/A d. Total dry metric tons per 365-day period of sewage sludge provided to receiving facility: _____ dry metric tons

N/A e. List, on this form or an attachment, the receiving facility's VPDES permit number as well as the numbers of all other federal, state or local permits that regulate the receiving facility's sewage sludge use or disposal practices:

Permit Number:	Type of Permit:
_____	_____
_____	_____

N/A f. Does the receiving facility provide additional treatment to reduce pathogens in sewage sludge from your facility? __Yes __No
Which class of pathogen reduction is achieved for the sewage sludge at the receiving facility?
__Class A __Class B __Neither or unknown
Describe, on this form or another sheet of paper, any treatment processes used at the receiving facility to reduce pathogens in sewage sludge:_____

N/A g. Does the receiving facility provide additional treatment to reduce vector attraction characteristics of the sewage sludge? __Yes __No
Which vector attraction reduction option is met for the sewage sludge at the receiving facility?
__ Option 1 (Minimum 38 percent reduction in volatile solids)
__ Option 2 (Anaerobic process, with bench-scale demonstration)
__ Option 3 (Aerobic process, with bench-scale demonstration)
__ Option 4 (Specific oxygen uptake rate for aerobically digested sludge)
__ Option 5 (Aerobic processes plus raised temperature)
__ Option 6 (Raise pH to 12 and retain at 11.5)
__ Option 7 (75 percent solids with no unstabilized solids)
__ Option 8 (90 percent solids with unstabilized solids)
__ None unknown
Describe, on this form or another sheet of paper, any treatment processes used at the receiving facility to reduce vector attraction properties of sewage sludge:_____

N/A h. Does the receiving facility provide any additional treatment or blending not identified in f or g above?
__Yes __No
If yes, describe, on this form or another sheet of paper, the treatment processes not identified in f or g above:

N/A i. If you answered yes to f., g or h above, attach a copy of any information you provide to the receiving facility

to comply with the "notice and necessary information" requirement of 9 VAC 25-31-530.G.

N/A j. Does the receiving facility place sewage sludge from your facility in a bag or other container for sale or give-away for application to the land? __Yes __No
If yes, provide a copy of all labels or notices that accompany the product being sold or given away.

k. Will the sewage sludge be transported to the receiving facility in a truck-mounted watertight tank normally used for such purposes? ✓ Yes ___ No. If no, provide description and specification on the vehicle used to transport the sewage sludge to the receiving facility.
Show the haul route(s) on a location map or briefly describe the haul route below and indicate the days of the week and the times of the day sewage sludge will be transported. IN PAST HISTORY Brownley picks up @ 8:30am on Tues., Wed. or Thurs. and transports to R&R in Pampa, VA. immediately. This is done on an as needed basis decided by operater.

7. Land Application of Bulk Sewage Sludge.
(Complete Question 7.a if sewage sludge from your facility is applied to the land, unless the sewage sludge is covered in Questions 4, 5 or 6; complete Question 7.b, c & d only if you are responsible for land application of sewage sludge.)

N/A a. Total dry metric tons per 365-day period of sewage sludge applied to all land application sites:_____dry metric tons

b. Do you identify all land application sites in Section C of this application? __Yes __No
If no, submit a copy of the Land Application Plan (LAP) with this application (LAP should be prepared in accordance with the instructions).

c. Are any land application sites located in States other than Virginia? __Yes __No
If yes, describe, on this form or on another sheet of paper, how you notify the permitting authority for the States where the land application sites are located. Provide a copy of the notification.

_____

_____

d. Attach a copy of any information you provide to the owner or lease holder of the land application sites to comply with the "notice and necessary" information requirement of 9 VAC 25-31-530 F and/or H (Examples may be obtained in Appendix IV).

8. Surface Disposal.
(Complete Question 8 if sewage sludge from your facility is placed on a surface disposal site.)

a. Total dry metric tons per 365-day period of sewage sludge from your facility placed on all surface disposal sites: _____ dry metric tons

N/A b. Do you own or operate all surface disposal sites to which you send sewage sludge for disposal?
__Yes __No
If no, answer questions c - g for each surface disposal site that you do not own or operate. If you send sewage sludge to more than one surface disposal site, attach additional pages as necessary.

c. Site name or number: _____

d. Contact person: _____
Title: _____
Phone: ( ) _____
Contact is: __Site Owner __Site operator

e. Mailing address.
Street or P.O. Box: _____
City or Town: _____ State: _____ Zip: _____

f. Total dry metric tons per 365-day period of sewage sludge from your facility placed on this surface disposal site: _____ dry metric tons

g. List, on this form or an attachment, the surface disposal site VPDES permit number as well as the numbers of all other federal, state or local permits that regulate the sewage sludge use or disposal practices at the surface disposal site:

Permit Number:	Type of Permit:
_____	_____
_____	_____

9. Incineration.
(Complete Question 9 if sewage sludge from your facility is fired in a sewage sludge incinerator.)

a. Total dry metric tons per 365-day period of sewage sludge from your facility fired in a sewage sludge incinerator: _____ dry metric tons

b. Do you own or operate all sewage sludge incinerators in which sewage sludge from your facility is fired? ___Yes ___No
If no, answer questions c - g for each sewage sludge incinerator that you do not own or operate. If you send sewage sludge to more than one sewage sludge incinerator, attach additional pages as necessary.

c. Incinerator name or number: _____

d. Contact person: _____
Title: _____
Phone: ( )_____
Contact is: ___Incinerator Owner ___Incinerator Operator

N/A

e. Mailing address.
Street or P.O. Box:_____
City or Town:_____ State:_____ Zip:_____

f. Total dry metric tons per 365-day period of sewage sludge from your facility fired in this sewage sludge incinerator: _____ dry metric tons

g. List on this form or an attachment the numbers of all other federal, state or local permits that regulate the firing of sewage sludge at this incinerator:

Permit Number:	Type of Permit:
_____	_____
_____	_____

10. Disposal in a Municipal Solid Waste Landfill.

(Complete Question 10 if sewage sludge from your facility is placed on a municipal solid waste landfill. Provide the following information for each municipal solid waste landfill on which sewage sludge from your facility is placed. If sewage sludge is placed on more than one municipal solid waste landfill, attach additional pages as necessary.)

a. Landfill name: _____

b. Contact person: _____
Title: _____
Phone: ( )_____
Contact is: ___Landfill Owner ___Landfill Operator

N/A

c. Mailing address.
Street or P.O. Box:_____
City or Town:_____ State:_____ Zip:_____

d. Landfill location.
Street or Route #:_____
County: _____
City or Town: _____ State:_____ Zip:_____

e. Total dry metric tons per 365-day period of sewage sludge placed in this municipal solid waste landfill: _____ dry metric tons

f. List, on this form or an attachment, the numbers of all federal, state or local permits that regulate the operation of this municipal solid waste landfill:

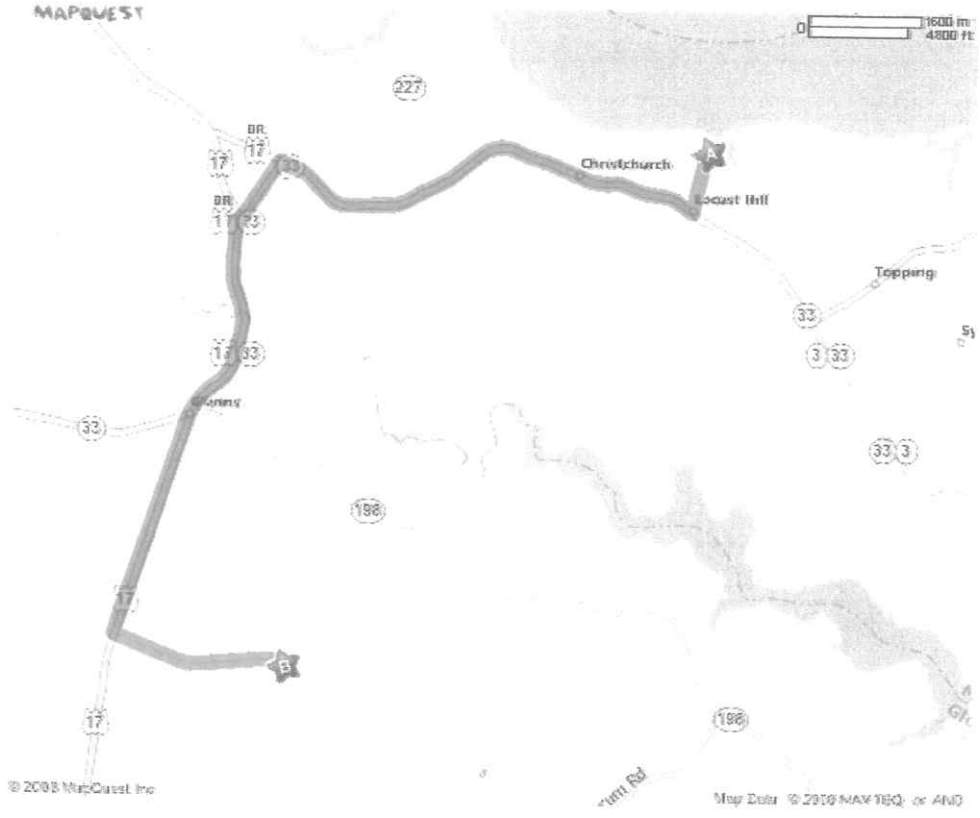
Permit Number:	Type of Permit:
_____	_____
_____	_____

g. Does sewage sludge meet applicable requirements in the Virginia Solid Waste Management Regulation, 9 VAC 20-80-10 et seq., concerning the quality of materials disposed in a municipal solid waste landfill? ___Yes ___No

h. Does the municipal solid waste landfill comply with all applicable criteria set forth in the Virginia Solid Waste Management Regulation, 9 VAC 20-80-10 et seq.? ___Yes ___No

i. Will the vehicle bed or other container used to transport sewage sludge to the municipal solid waste landfill be watertight and covered? ___ Yes ___ No
Show the haul route(s) on a location map or briefly describe the route below and indicate the days of the week and time of the day sewage sludge will be transported. _____
_____

Sludge haul route from Mizpah to R&R Treatment.



A: Mizpah Health Care Ctr: 74 Mizpah Rd. Locust Hill, VA 23092, (804)758-5260

START	1: Start out going SOUTH on VA-634 toward VA-33 W.	0.7 mi
33	2: Turn RIGHT onto VA-33 W.	5.1 mi
	3: Turn LEFT onto US-17 BR/VA-33.	0.8 mi
17	4: Turn LEFT onto US-17 S/VA-33 W/GEORGE WASHINGTON MEMORIAL HWY. Continue to follow US-17 S/GEORGE WASHINGTON MEMORIAL HWY.	5.0 mi
	5: Turn LEFT onto PAMPA RD.	1.9 mi
	6: PAMPA RD becomes VA-601.	0.0 mi
END	7: End at 5542 Pampa Rd Gloucester, VA 23061-2707	

Estimated Time: 21 minutes Estimated Distance: 14 miles

B: 5542 Pampa Rd. Gloucester, VA 23061-2707

Total Time: 21 minutes Total Distance: 14 miles